Environmental Enforcement and Compliance in South Eastern Europe

Compiled Report on Legal Structures and Resources
Currently Available to Environmental Protection Agencies
and Inspectorates in South Eastern Europe

A BERCEN Publication

THE REGIONAL ENVIRONMENTAL CENTER
for Central and Eastern Europe

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THE REGIONAL ENVIRONMENTAL CENTER
for Central and Eastern Europe

REReP

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About the REC

The Regional Environmental Center for Central and Eastern Europe (REC) is a non-partisan, non-advocacy, not-for-profit organisation with a mission to assist in solving environmental problems in Central and Eastern Europe (CEE). The Center fulfils this mission by encouraging cooperation among non-governmental organisations, governments, businesses and other environmental stakeholders, by supporting the free exchange of information and by promoting public participation in environmental decision-making.

The REC was established in 1990 by the United States, the European Commission and Hungary. Today, the REC is legally based on a charter signed by the governments of 27 countries and the European Commission, and on an international agreement with the Government of Hungary. The REC has its head office in Szentendre, Hungary, and local offices in 15 CEE countries, which are: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, FYR Macedonia, Poland, Romania, Serbia and Montenegro,Slovakia and Slovenia.

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BTF	Balkan Task Force
BOD	Biological oxygen demand
CEE	Central and Eastern Europe
CEP	Committee for Environmental Protection (Albania)
CH_4	Methane
CO	Carbon monoxide
CO_2	Carbon dioxide
COD	Chemical oxygen demand
COP	Convention of Parties
DG-ENV	European Commission DG-ENV - Environment, Nuclear Safety and Civil Protection
DPA	Dayton Peace Accord
DU	Depleted uranium
EBRD	European Bank for Reconstruction and Development
EDC	Ethylene dichloride
EEA	European Environment Agency
EIA	Environmental impact assessment
EIONET	European Environment Information and Observation Network
EC	European Commission
EU	European Union
FBiH	The Federation of Bosnia-Herzegovina (western entity within BiH)
GDP	Gross domestic product
GNP	Gross national product
HCl	Hydrogen chloride
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature and Natural Resources/World Conservation Union
MAC	Maximum allowed concentration
MEW	Ministry of Environment and Waters (Bulgaria)
MoEPP	Ministry of Environment and Physical Planning (FYR Macedonia)
MWEP	Ministry of Water and Environmental Protection (Romania)
MOE	Ministry of Environment
NASEM	National System for Environmental Monitoring (Bulgaria)
NATO	North Atlantic Treaty Organization
NEA	National Environment Agency (Albania)
NEAP	National Environmental Action Plan
NCESD	National Center for Environment and Sustainable Development (Bulgaria)
NGO	Non-governmental organisation
NEPF	National Environmental Protection Fund (Bulgaria)
NH_3	Ammonia
NIHP	National Institute for Health Protection (FYR Macedonia)
NMHC	Non-methane hydrocarbons
NO	Nitrogen oxide
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides (non-specific)
OECD	Organization for European Cooperation and Development
PAH	Polyaromatic hydrocarbons
PCB	Polychlorinated biphenyls
PHARE	Poland and Hungary: Action for the Restructuring of the Economy
PEPA	Priority Environmental Projects for Accession
REC	The Regional Environmental Center for Central and Eastern Europe
REReP	Regional Environmental Reconstruction Program for South Eastern Europe
REWI	Regional Environmental Inspectorate (Bulgaria)
RS	Republika Srpska (eastern entity within BiH)
SECI	Southeast European Cooperative Initiative
SEE	South Eastern Europe
SFOR	Stabilization Force (Bosnia and Herzegovina)
SIDA	Swedish International Development Agency
SIEI	Sofia Initiative on Economic Instruments
SO_2	Sulphur dioxide
SO_x	Sulphur oxides
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNMiK	United Nations Mission in Kosovo
VCM	Vinyl chloride monomers
VOC	Volatile organic compounds

Foreword

Networks play an important role in improving inspections and enforcement, and in enhancing the effectiveness of environmental law. They also promote exchanges of information and experience, and lead to the development of a more consistent approach toward implementation, application, enforcement and reporting of environmental legislation. The great variety of environmental and institutional challenges within Europe today can only be faced in a positive and practical way through close cooperation between existing networks.

Since its inception in December 2001, the Balkan Environmental Regulatory Compliance and Enforcement Network (BERCEN) has made substantial contributions to environmental capacity-building and the development of effective institutional structures throughout South Eastern Europe. BERCEN provides an excellent opportunity for regulators and practitioners from these countries to learn and work together to address common problems. Close cooperation and a wealth of experience from other networks — such as the European Union Network for the Implementation of Environmental Law (IMPEL); one of the most successful environmental networking initiatives of the European Union — have helped lay the foundation for this promising new network. Fostering and improving this mutual network of cooperation will help to integrate the countries of the Balkan region into European structures in the near future, and to improve environmental performances in general. On a wider front, the dialogue encouraged by networks such as this will help to rebuild trust between the countries of the region — and that will be to everyone's benefit.

Georges Kremlis
Head of Unit,
IMPEL Co-Chair
Environment Directorate-General
European Commission

The International Network for Environmental Compliance and Enforcement (INECE), as reflected in the strategic implementation plan, is committed to coordinating efforts in the Balkans with BERCEN and to participation in BERCEN activities. This commitment includes the sharing of training and Internet resources and assisting BERCEN with building capacity to implement and enforce new regulations and laws in BERCEN member countries.

In publishing the Compiled Report on the Current Legal Structure and Resources Available to the Environmental Protection Agencies and Inspectorates in the Countries of South Eastern Europe, BERCEN has taken extremely important step forward in determining enforcement-programme strengths and assessing the needs of its eight member countries. INECE will consider the extensive data compiled in the Report as it develops and pilot-tests a set of compliance and enforcement indicators. We hope that the "INECE indicators" project will result in performance measures capable of allowing BERCEN countries to assess the effectiveness of their enforcement activities.

INECE applauds BERCEN's efforts to encourage countries to work together on projects to advance the application and implementation of environmental legislation, and to increase the effectiveness of enforcement agencies for inspectorates. We congratulate BERCEN on its one-year anniversary, and recognises the significant accomplishments it has made during this short time. INECE looks forward to working together to meeting shared goals and assisting other BERCEN countries in following the lead of BERCEN observer countries Bulgaria and Romania through the accession process and into the European Union.

Durwood Zaelke
International Network for Environmental
Compliance and Enforcement (INECE)


BELARUS
POLAND
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REPUBLIC
SLOVAKIA
AUSTRIA
MOLDOVA
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SLOVENIA
ROMANIA
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GREECE

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The Balkan Environmental Regulatory Compliance and Enforcement Network (BERCEN) was established in Tirana, Albania in December 2001. BERCEN is an informal network that facilitates, assists and promotes enforcement of regulations throughout South Eastern Europe by disseminating information and finding ways for participating countries to cooperate and develop projects of common interest. BERCEN operates within the framework of the Stabilisation and Association Process. BERCEN participants intend to work together on projects to make progress in the implementation of environmental legislation and to increase the effectiveness of enforcement institutions.

One of the first BERCEN activities was to analyse levels of compliance and enforcement with regard to laws and regulations in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Romania, Serbia and Montenegro and FYR Macedonia. The national reports on current legal structures and resources available to environmental protection agencies and inspectorates were compiled by their respective local experts: Arben Pustina, Albania; Nicolae Horea Avram, Romania; Svetlana Zhekova, Bulgaria; Gordan Stankovic, FYR Macedonia; Mladen Rudez and Borislav Jaksic, Bosnia and Herzegovina; Gordana Pehnec, Croatia; and Zeljko Pantelic and Tomislav Andjelic, Serbia and Montenegro.

Based on these national assessments, a regional *Report on the Current Legal Structure and Resources Available to the Environmental Protection Agencies and Inspectorates in the Countries of South Eastern Europe* was compiled. The key person behind this report was Robert Glaser in the Netherlands. He also contributed considerably to the establishment of the network and has continuously shared his extensive field experience with BERCEN.

All national assessments have been approved by the respective BERCEN national coordinators: Alma Bako, Albania; Sladjana Miocic, Croatia; Andjelka Mihajlov and Biljana Djurovic, Serbia and Montenegro; Daniela Florea, Romania; and Miroslav Balaburski, FYR Macedonia.

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About BERCEN

The Balkan Environmental Regulatory Compliance and Enforcement Network (BERCEN) was established in Tirana, Albania in December 2001. BERCEN is an informal network that facilitates, assists and promotes enforcement of regulations throughout South Eastern Europe (SEE) by disseminating information and finding ways for participating countries to cooperate and develop projects of common interest. BERCEN participants intend to work together on projects to make progress in the application and implementation of environmental legislation and to increase the effectiveness of enforcement agencies and/or inspectorates.

The country profiles are the basis of this regional - needs assessment. One of the first activities of BERCEN was to analyse the situation of compliance with and enforcement of laws and regulations in eight countries.

The analysis clearly indicates differing stages of development in the BERCEN member countries. Two BERCEN observer countries, Bulgaria and Romania — both involved in the process of accession to the European Union (EU) — are of great importance to this network because the advancement of their development can serve as an example to others in the network, and knowledge transfer can be performed relatively easily.

What follows is a summary of the results of this assessment. The laws and regulations of SEE countries are being upgraded and reviewed. The Republic of Serbia has initiated a complete revision of its body of law. The overall weak points are the implementation and enforcement of new regulations and laws in nearly all BERCEN member and observer countries. The basic ingredients, including data compilation and retrieval systems, hardware and software to support these systems and training for personnel in the regulatory cycle, are not present. The country profiles presented by the BERCEN member and observer countries clearly indicate these shortcomings. This first step has to be followed by a prioritising of these various shortcomings.

The tables derived from the country profiles and presented in this overview have to be treated with great care because the individual countries might have different perceptions of the words used, the questions asked and the way they are presented. These tables should therefore only be used in an indicative way. One has to remember that a number of these countries have never before showed or described their systems to others outside their country, nor have they ever before analysed their needs.

Conclusions

A checklist of subjects to be dealt with in the country profiles was used in assessing the needs with respect to compliance and enforcement. Identified needs are not prioritised.

The ways to reach the targets are quite different, depending on the stage of development in each BERCEN member and observer country.

The following main conclusions are drawn from the country profiles:

1. Most of the countries have adjusted their laws and regulations to the new political reality, and this legislation is in the process of implementation. These countries expect assistance from BERCEN, from other countries that comprise BERCEN, the European Union (EU) and other international donors and countries.

2. The environmental ministries — or, institutions that serve the same function — have been integrated in some cases with ministries of physical planning or ministries of water in order to improve capability and efficiency.

3. Various ministries cooperate on environmental issues, but this is based mostly on personal relations rather than formal relations. Ministries of defence cooperate hardly at all in environmental issues, even though military activity has caused considerable environmental damage.

4. Most inspectorates indicate a lack of personnel with the legal training, necessary to develop enforceable permits, structured compliance monitoring, consistent non-compliance response, and enforcement procedures that are strict but will stand in court. Inspectorates lose 50% of their court cases, which diminishes their credibility.

5. Inspectorates could do better in the area of advising on how to comply with permits (free or compulsory advising). The need to strengthen this capability is stressed by nearly all SEE countries. In some countries, inspectors actually write the permit conditions that they must enforce at a later stage.

6. Compliance promotion is just being implemented; compliance checking is under-developed; and programme compliance inspection is weak. Strategies in non-compliance response and condoning do not exist: and neither does a code of conduct for inspectors.

7. In theory, inspectorates possess adequate tools to enforce laws. They strongly indicate the need for training — including courses in law — and they need better support in the area of human resources.

8. Training is very much undervalued in SEE countries. Management gets no training whatsoever, while other staff receive only a few days per year, if any,. Inspectors have an average of just more than 15 years experience in most of the SEE countries, though those in FYR Macedonia are younger and have five to six years' experience on average. The lack of staff training makes for very static organisations.

9. Reporting on inspection visits is common, although inspectorates have yet to establish performance indicators on the effectiveness of such visits, other than annual figures on the number of visits, court cases and days spent on inspection. The number of inspection days varies between SEE countries, depending on the definitions of inspection and functions of inspectors. However, a yearly average of about 150 days per inspector is a reasonable estimate.

10. Most countries need training in "on-site visits" to achieve more efficient and structured inspections.

11. Data storage and data-retrieval systems are underdeveloped. Most countries still rely to a great extent on paper archives. Electronic archiving is on its way in a number of SEE countries but hardware and software is urgently required, along with training in the use of this equipment.

12. Monitoring and reporting on the state of the environment is weak, considering the human resources and information available within the inspectorates.

13. Small and simple monitoring equipment to be used in emergency situations is lacking, which hinders quick response to environmental accidents.

14. Compliance assessments are not performed other than through permitting authorities and self-inspections by industry. Some of these assessments are in response to complaints. Inspectorates need to establish compliance indicators as part of a compliance strategy.
15. Enforcement-performance indicators are similarly deficient. Well-defined performance indicators would help inspectorates become more efficient.

Overview

Introduction

Over the past decade, the South Eastern Europe (SEE) Stability Pact countries have initiated legislative reforms and have brought their environmental institutional structures in line with the new reality. These countries have realised that changes are necessary, and they have drafted new laws accordingly. But, in many cases, they have not paid due attention to enforcement. Too little attention is paid to the institutional capacity and capability required to make the laws work.

Common difficulties include:

- lack of human, technical and financial resources;
- uncertain positions of environmental authorities within governmental structures;
- insufficient regulatory frameworks;
- ineffective compliance and enforcement activities;
- weak permitting systems;
- non-compliance with multilateral environmental agreements (MEAs); and
- lack of public participation.

BERCEN assists and promotes enforcement of regulations throughout SEE by disseminating information and finding ways for participating countries to cooperate and develop projects of common interest. BERCEN member and observer countries intend to work together on projects to make progress in the application and implementation of environmental legislation and to increase the effectiveness of enforcement agencies or inspectorates.

Bulgaria and Romania (both BERCEN observer countries) are important because they will share their experiences related to the process of accession to the European Union.

BERCEN will draw closer to its sister networks; namely the EU Network for the Implementation and Enforcement of Environmental Law (IMPEL) and Accession Countries (AC)-IMPEL according to the intentions of the Stabilisation and Association Process (SAP). BERCEN will strengthen links to other networks such as NISECEN of the former Soviet states and the International Network for Environmental Compliance and Enforcement (INECE).

As a first step in the development of BERCEN — officially established in Tirana, Albania in December 2001 — a project called "Needs Assessment in SEE Countries" was initiated based on individual profiles of SEE countries.

This report is a compilation of eight BERCEN profiles, and a discussion of their experiences.

Administration

In the transition from war conditions, the administrations of many SEE countries have been looking for the ways and means to adjust to more stabilised conditions. While decentralising their governments and gearing up for possible EU accession, new laws and regulations are needed; not only to deal with the newly privatised economy, but also to safeguard the environment. These countries are moving towards framework laws and integrated approaches. This means a slow process of adjustment from a single-media approach to a multimedia approach in permitting and inspections. Different ways of managing and operating inspectorates are required for sector specialists, as well as generalists. Regulators have to broaden their tasks from ad-hoc, complaint-driven inspections to systematic, programmatic enforcement.

The BERCEN observer countries, Bulgaria and Romania, are in the process of EU accession and may assist BERCEN member states in making efforts to join the union.

Old-style centralised administrations still exist, and regional inspectorates that function in many countries are directly accountable to central governments or ministries. Single-media inspections are common, as are separate permits for different media. A few agencies with well-defined responsibilities are becoming more independent, but they still have strict reporting obligations to the central government.

Framework laws have been introduced and scrutinised for their applicability, and modernisation is evident in such trends as the movement from sectoral permitting and inspection to a more integrated approach. This requires laws to be fine-tuned and implemented.

The following review (Table 1 on page 12) shows the dates when laws and regulations were updated.

TABLE 1

When did the government last review its laws and regulations?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Ministry of Environment	2001	2001	2001	2000	2000	2001 2002	2001	2001
Environmental Agency	NA	NA	1999	NA	2000	NA	NA	NA
Environmental Inspectorate/ Agency	1998	NA	NA	NA	2000	NA	NA	2001
Competencies of inspectors	1996	NA	NA	1994	2000	NA	1996	2000
Specific laws on air pollution	Draft	NA	2001	1995	1999	1997	2001	1993, 1995, 2000, 2001
On water	Draft	NA	1999 and EU 2002	1995	2000	1993	1997	1996
On waste	Draft	NA	2000	1995	1998	1996	2000	2001
On noise		NA	1999	1990	1993	1992	1995	1995, 1997
On urban planning	1998	NA	2001	2000	1999	1997	2000	1991, 2000
On soil	2000	NA	2000	NA	Does not exist	1994	1997	1995
On energy	1995	NA	2000	2001	Does not exist	NA	NA	NA

TABLE 2

How much time does it take to change, develop or write new laws or regulations?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of of Serbia	Republic of Montenegro	Romania
Basic environmental law	1 year (in 2002)	NA	6-8 months	NA	6-9 months	NA	1-2 years	NA
Specific environmental law	2 years	NA	GMO 2002	NA	12 months	NA	1-2 years	NA
Regulations within the framework	2 years	NA	NA	NA	NA	NA	6-12 months	NA
Standards	2 years	NA	EU accession expected in 2007	NA	NA	NA	6-12 months	EU accession expected in 2007

Some of this legislation is still being drafted, but most countries have reviewed their laws since 1997.

Most of the countries have reviewed and defined the function and organisation of their ministries of environment in 2000 or 2001. The Republic of Serbia is developing a framework law for the environment. An international team is working with the Serbian government, and its new environmental law is expected to be promulgated in 2002.

Such laws normally take one to two years to develop, although Bulgaria and FYR Macedonia managed the task within six to eight months. (See Table 2 on page 11.)

Assistance is required with framework laws, especially in the implementation phase and the development of standards. Most standards are nowadays derived from EU directives. Drastic reorganisation of institutions is also required in order to adopt new approaches to environmental problems.

In many countries, ministries of environment are combined with ministries of physical planning or water.

Tables 1 and 2 were extracted from the country profiles.

Institutions and Cooperation

Cooperation between environmental protection agencies (EPAs)/inspectorates and other ministries and agencies with an interest in the environment is extremely important. Table 3 on page 14 paints an overall picture; one that shows numerous existing lines of cooperation. Whether the level of cooperation needs improvement or restructuring cannot be easily ascertained. Albania, for example, indicates such a need. It becomes increasingly important to develop these lines once systematic enforcement programmes are developed. In most countries, however, such programmes are still missing, due to the lack of human resources and political will to become organised.

Most coordination takes place on an ad-hoc basis and seems to be based on personal contacts rather than institutional or formal contacts. In many cases this cooperation seems to function well, although such systems are difficult to maintain, due to frequent changes in personnel and responsibilities.

Interior ministries and police departments assist inspectorates with environmental enforcement in only a few countries. The police, however, are not involved in compliance promotion work. They have the equipment and manpower to patrol industrial facilities and could serve as an early warning system, though they would need to be trained in environmental matters. Defence ministries rarely cooperate with environmental inspectorates; a disturbing fact, considering that the army is a significant polluter in many countries. Military forces contribute to soil pollution through petrol leaks and by dumping waste – some of it hazardous – which, in turn, poses risks to aquifers.

It is encouraging to see that most environmental ministries have good contacts and relations with environmental NGOs.

In the area of improving cooperation, the deepest need is for coordinating bodies for programmatic enforcement. In addition, criminal investigations into fraud, illegal dumping and trans-boundary transportation of waste require high levels of cooperation between authorities.

The Permitting System and Inspectorate Involvement

The effective functioning of inspectorates or inspection systems depends to a great extent on the quality of the permits and the degree of specificity in laws and general regulations behind the permits. It is of major importance that the inspectors know the contents of permits before they are issued, and that they either lend advice (compulsory or non-compulsory) to assure compliance with conditions and/or come up with other conditions. In this way they can make sure permits are enforceable. This, in turn, will greatly improve the efficiency of inspections, and lawsuits stemming from misinterpreted or vaguely defined conditions will be avoided.

Integrated permitting is becoming more common in the SEE. This is partly driven by the EU accession processes underway in BERCEN observer countries Bulgaria and Romania. Albania is also pursuing integrated permitting.

Some countries have inspectors who write permits for the same installations that they inspect. Although this system makes efficient use of knowledge and human resources, it may pose a conflict of interest. The separation of permitting and enforcement functions is in line with the philosophy of good governance *(trias politica)*.

In most SEE countries inspectorates have the obligation to advise in the permitting process, though they do not generally write permits. Inspectorates may appeal against the conditions of the permit. (See Table 4 on page 15.)

Concerning inspectorates, the deepest need is to build advisory capacity and manpower. (See Table 5 on page 16.)

Compliance Checking and Promotion

Compliance checking and compliance promotion are basic tasks in the day-to-day work of the inspector, and cornerstones in a systematic compliance and enforcement strategy. However, most SEE countries do

TABLE 3

With which organisations does the environmental agency/inspector or its regional ofices cooporate?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Ministry of Interior and Police	Yes	NA	NA	Yes	Yes	Yes	Yes	Yes: plus inspectorate
Ministry of Water	NA	Yes	Yes: within the ministry	Yes	Yes	Yes	Yes	Yes: within th ministry
Ministry of Agriculture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Forestry/Nature Directorate	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Ministry of Health	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes: plus inspectorate
Ministry of Public Works/Tourism/ Physical Planning	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Ministry of Mining/Energy	Yes	Yes	Yes: agency	Yes	Yes	Yes	Yes	Yes: national companies
Ministry of Transport	NA	Yes	Yes	Yes	Yes	NA	Yes	Yes: national companies
Academy of Science	Yes	Yes	NA	No	Yes	NA	Yes	NA
Port authorities	Yes	NA	NA	Yes	Yes	NA	Yes	Yes
River catchment basins	Yes	NA	Yes: 4 regional inspectors	No	Yes	NA	Yes	Yes
Communities/ municipalities	Yes	NA	Yes: on waste and water	Yes	Yes	Yes	Yes	Yes
Ministry of Defence	NA	NA	NA	Yes	Yes	NA	NA	Yes
NGOs	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes: working group

not take a systematic approach to compliance promotion. They have compulsory annual inspection activities and ad-hoc compliance checking to address complaints. No compliance checks related to specific environmental elements, such as air, water or soil, are carried out in SEE countries. (See Table 6 on page 17.)

Compliance promotion does not seem to be present, and strategies are not yet developed. Once the compliance check has taken place, reporting and follow-up are structured, and non-compliance responses seem to be in place.

Still, the country profiles indicate an urgent need for strategies in non-compliance response. Other needs include a code of conduct for inspectors, a condoning strategy and a non-compliance response strategy. (See Table 7 on page 18.)

TABLE 4

In what ways are inspectorates/agencies involved in the permitting process?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Integrated permitting	Yes	Yes	Yes: in the future	NA	No	NA	No	Yes: PHARE project
Not at all	NA	NA	NA	Yes	No	NA	Yes	NA
Compulsory advising	Yes	NA	Yes: inspectorate	NA	No	Yes	No	Yes
Free	NA	NA	NA	Yes	No	NA	Yes	Yes
Permit writing	Yes	NA	Yes: inspectorate deals with hazardous wastewater use	No	No	NA	No	Yes
Approval of permits	Yes	Yes	Yes: inspectorate covers whole nation	No	No	NA	No	Yes
Appeal procedures against permits	Yes	NA	NA	Yes	No	NA	No	Yes
Public hearing on permits	No	NA	Yes: inspectorate	Yes	No	NA	Yes	Yes
Court hearing on permit appeals	No	NA	NA	NA	No	NA	Yes	Yes
Number of permits per year	350	NA	800 waste; 69 ground resources; 2,500 import/export of animals; 1,692 dangerous substances imports; 12 ozone depleting imports	NA	NA	NA	190	42,656 total; including 13,651 environmental agreements (32%) and 29,005 environmental permits (68%)

Enforcement

In evaluating the function of inspectorates or an inspection body, a system must be developed from the tools available in the organisation. Most organisations make an annual plan, but enforcement strategies have not yet been developed in all inspectorates. This may mean that annual planning is a routine type of procedure because the law requires compulsory inspections. Due to the lack of human resources, the quality of inspections themselves may be impaired, hence the expressed need for training in enforcement practices and law. Another indicator might be the expressed need for training in human resource management. (See Table 8 on page 18.)

Theoretically, the inspectors of all the countries have the tools to do their jobs. However, there seems

TABLE 5

What are the needs of the inspectorates/agencies in the permitting process?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Inspectorates are involved in the permitting process	No	NA	NA	No	Yes	NA	NA	NA
Improve advising capabilities	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Compulsory advising capabilities	Yes	NA	NA	Yes	Yes	NA	Yes	NA
Rejection/ acceptance of permit applications	Yes	NA	NA	No	Yes	NA	NA	NA
More staff for permit checks	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes

to be a great need for training in technical aspects of enforcement, in the implementation of laws and in the management of human resources. These are all indicators of systems that need strengthening. (See Tables 9 and 10 on page 19.)

Inspectors are not allowed to investigate accounting or bookkeeping in relation to suspected false reporting of waste handling, disposal costs, purchases of fuels from suppliers who mix chemical waste with their products, illegal cross-border transportation of waste, etc.

Environmental Inspection Organisations, Human Resources and Training

Table 11 on page 20 shows wide variation in the number of people involved in enforcement in SEE countries. This depends not only on the size and industrial development of the country, but also on the emphasis placed by policy-makers on domestic environmental issues. Montenegro is very small and puts great emphasis on the environment, but has just four inspectors who conduct 231 inspections per year. Bulgaria has 400 inspectors who conduct 14,600 inspections a year. For both countries, each inspector conducts about 50 inspections annually. In Romania inspectors do an average of 250 inspections annually, and the government gives some attention to their training. Other countries have no data on training, or report that no training is carried out. One reason may be that, with employees having an average of more than 15 years' experience, further training is deemed unnecessary.

The composition of personnel is known only in a few countries, which may indicate that management does not place much emphasis on the quality of workers or the specific knowledge required for their jobs. It is surprising that the inspectorates of most countries have no personnel with law degrees.

In most countries, inspectorate managementis not concerned with cost-effectiveness; a symptom of centralised governmental structures. This is understandable in smaller countries, but shows limited operational flexibility for the regional inspectorates of larger countries.

Human-resource management that concerns itself with required skills, training of managers, training in law and optimising inspection efficiency is in high demand.

Environmental Inspection in Practice

According to Table 12 on page 21, the activities of most inspectorates are complaint-driven; in some cases accounting for more than 50 percent of their work, which means that less time is spent on programmatic inspections. About 1-1.5 percent of inspection visits lead to court cases, on par with rates in many countries. As a rule, all inspections should be documented with a report, and most of the SEE inspectorates indicate they

TABLE 6

Activities of inspectorates/agencies in compliance promotion and compliance checking

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Planned compliance promotion activities	NA	Yes	No	No	No	NA	Yes	No
Ad hoc promotion activities	No	NA	No	No	Yes	NA	Yes	Yes
Annual compulsory compliance checking	No	NA	Yes	Yes	Yes	NA	Yes	Yes
Ad hoc compliance checking	Yes	NA	NA	Yes	Yes	NA	Yes	Yes
Only complaint driven compliance checking	No	NA	Yes, but not limited to this	No	No	NA	Yes	No
Compulsory follow-up actions	Yes	NA	Yes	Yes	NA	NA	Yes	Yes
Reporting obligations	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Non-compliance response	Yes	NA	Yes	Yes	Yes	NA	Yes	No
Condoning strategy	No	NA	NA	No	No	NA	NA	No
Does compliance checking cover all environmental fields?	Yes	Yes	Yes: (noise) by regional health inspectorates	Yes	Yes	No	No	Yes: (noise) Regional Health Inspectorate, (radioactivity) Ministry of Water/ Environment

adhere to this guideline. On the negative side, inspectorates win just over half of the cases that wind up in court, which is quite low. This requires careful analysis by management, as it may mean that laws are not clear enough, permit conditions are not enforceable, or the quality of the inspectors' work is not up to legal standards. This could also mean that judges are poorly trained or that the judiciary is politically influenced. This problem should be taken seriously, as inspectorates put in significant effort to present cases in court and achieve only meagre results for their work.

The disparity in average number of days per year on inspections also bears scrutiny. A figure of 150 days, including preparation and follow-up, seems to be a reasonable goal to strive for. Inspectors also attend meetings, attend to internal communication, undergo training and approve permits.

According to Table 13 on page 21, inspection indicators are urgently needed as is training in the relevant laws.

TABLE 7

Needs assessment for compliance checking and promotion

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Planning for compliance checking	Yes	Yes	NA	Yes	Yes	NA	Yes	Yes
Communication skills for cooporation with other authorities	Yes	Yes	NA	Yes	Yes	NA	Yes	NA
Compliance promotion strategies	Yes	Yes	Yes	No	Yes	NA	Yes	NA
Code of conduct for compliance checking/promotion	Yes	NA	Yes	NA	Yes	NA	Yes	NA
Condoning strategy	Yes	NA	Yes	No	Yes	NA	NA	NA
Non-compliance response strategy	Yes	Yes	NA	Yes	Yes	NA	Yes	NA

TABLE 8

What is available to the inspectorate/agency in enforcement?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Annual planning of enforcement actions	NA	Not yet	Yes	Yes	No	Yes	Yes	Yes
Enforcement strategies/ condoning	No	Not yet	No	Yes	No	NA	Yes	Yes
Setting of penalties	Yes	Not yet	Yes	Yes	No	NA	Yes	Yes
Ability to initiate legal action	Yes	Not yet	Yes	Yes	Yes	Yes	Yes	Yes
Ability to prosecute	No	NA	No	Yes	Yes	NA	Yes	No
Ability to appeal court decisions	Yes	NA	Yes	No	Yes	NA	Yes	Yes
Liability protection from the state	No	NA	Yes	Yes	No	NA	Yes	Yes

TABLE 9

What can inspectors do to enforce laws?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Conduct site visits unannounced	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Order immediate closures of factories or parts of same	Yes	NA	Yes	Yes	Yes	Yes	Yes	Yes
Issue penalties and collect fines	Yes	Yes	Yes	NA	Yes	NA	Yes	Yes
Call for police assistance	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Check accounting and bookkeeping	No	NA	No	Yes	Yes	NA	No	No
File administrative charges	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
File criminal charges	Yes	NA	No	No	Yes	Yes	Yes	No

TABLE 10

What do inspectorates/agencies need for more effective law enforcement?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Technical training in enforcement practices	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes
Legal training	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes
Human resources management	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes
Planning	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes

Data Storage and Retrieval

Inspectors need not only in-depth knowledge of the laws that they enforce, but also all available data on the facilities they inspect. Data storage and retrieval systems are essential to any inspectorate. Paper archives nowadays are being partly replaced by electronic archiving, which enables fast recovery of data and easy recording. Reporting on inspectorate performance and the development of annual inspection plans are impossible without such systems.

These days, electronic internal communication and exchange of information are a musts for any operational inspectorate.

The situation is quite disturbing in SEE countries, except in BERCEN observer countries Bulgaria and Romania, where modern equipment, including software and hardware, is available and used. SEE countries have only paper archives and, therefore, data retrieval is slow. Data on industries, national inventories of chemicals and information about permits are either non-existent or difficult to acquire. By the same token, public access to such information is very limited. (See Table 14 on page 22.)

TABLE 11

What is available to inspecorates/agencies in the areas of training and human resource management?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Number of inspectors	42	NA	400 -	33	8	39	4	1,883 at 42 county inspectorates (400 deal with enforcement)
Number of inspection visits/year	1,000	NA	14,600	2,850	1,000	4,560	231	150,000 (100,000 enforcement 50,000 Permit)
Percentage of biologists	20	NA	NA	NA	No	12.5	0	NA
Percentage of chemists	20	NA	NA	NA	60	5	0	NA
Percentage of lawyers	4	NA	NA	0	20	2.5	0	Low
Average experience (yrs)	15	NA	NA	NA	5-6	18	20	NA
Management training (weeks per year)	2	NA	NA	No	1-2	NA	0	3-4 days per inspector per year
Staff training (weeks per year)	3	NA	NA	1	1	1	0	3
Budget management	No	NA	NA	No	Yes	NA	0	NA

The needs are obvious, as indicated by Table 15 on page 22. Although Bulgaria and Romania have some electronic data-gathering capability, further upgrades are a must. Functional data systems are of major importance to programmes for capacity and capability strengthening in SEE countries.

Monitoring and Sampling

The state of the environment is monitored by most inspectorates in SEE countries. Some scrutiny of these records occurs because data storage and retrieval systems cannot provide sufficient back-up on reporting. (See Table 16 on page 23.)

Industry self-monitoring to ensure permit compliance takes place in a number of countries, including Albania, Romania and Bulgaria. Sampling by inspectorates takes place in most countries. These countries have small regional laboratories and larger national laboratories with properly defined methods of sampling and analyses prescription.

The needs as indicated by the country profiles are for training in sampling techniques, quality assurance and the use of small monitoring equipment. The last item is of importance for rapid responses to emergency situations. (See Table 17 on page 23.)

Compliance Assessment

The subject of compliance assessment has not been developed in the SEE (nor has it, indeed, in many other regions around the world). Some compliance estimates are made based on inspection results and self-monitoring data from industies. Data from independent measurements by inspectorates are difficult to collect. In many countries, assessments are made through inspectorate investigations that focus on countrywide, random checks on air, water, soil and other environmental elements. The collected data is then extrapolated to produce a countrywide picture. (See Table 18 on page 23.)

Complaint recording may also give some indication of compliance levels, but the reliability of such record-

TABLE 12

What are the main activities of inspectorates/agencies?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Court cases per visit	0%	NA	NA	1.5%	4%	2	0.87%	1.3%
Reports per visit	100%	NA	NA	100%	80%	10	100%	100%
Complaint-driven visits/total	50%	NA	NA	40%	80-90%	NA	16.45%	1-2%
Percentage of court cases won	0%	NA	NA	55%	5%	NA	NA	40%
Average number of inspection days per year	200	NA	NA	120	NA	140	250	Approx. 200

TABLE 13

What do inspectorates/agencies need to operate more successfully?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Development of indicators	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Training in report writing	Yes	NA	NA	No	No	NA	Yes	NA
Training in laws	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Training in site visits	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes
Development of investigating skills	Yes	NA	NA	Yes	Yes	NA	Yes	Yes

ing is highly dependent on local conditions.

The need for an assessment tool is clearly indicated by most SEE countries. (See Table 19 on page 24.)

Enforcement Performance, Actions and Reporting

It is difficult to measure how well inspectorates enforce laws. This may be gauged by the number of fines issued or the amount of fines collected per year. The state of the environment is another indicator of an inspectorate's effectiveness, but this requires long-term evaluation. To date, no single gauge has proved sufficiently reliable, hence the mixture of indicators listed below. Peer reviews might also help in the evaluation of an inspectorate's enforcement ability. (See Tables 20 and 21 on page 24.)

TABLE 14

What are the main data storage and retrieval systems available to the inspectorate/agency?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Paper archives only	Yes	Yes	NA	NA	No	NA	Yes	Old database
Paper archives and electronic storage	NA	NA	Yes	Yes	Yes	Yes	No	Yes
Intranet	NA	NA	Some	No	Yes	NA	NA	NA
Database on waste	NA	NA	Yes	No	No	Yes	Yes	Yes
Databases on chemical	NA	NA	No	No	No	NA	Yes	Yes
Databases on industries	NA	NA	Yes	No	No	NA	Yes	Yes
Databases on permits	NA	NA	Yes	No	No	NA	Yes	Yes
Public access to data	NA	NA	Yes	No	No	NA	Yes	Yes

TABLE 15

Needs assessment for data storage and retrieval

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Software for databases	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Training in use of databases	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Computer hardware	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industrial activities inventory	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA

TABLE 16

What is monitored and recorded by inspectorates/agencies?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
State of the environment	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Self-monitoring by permit holders	Yes	NA	Yes	Yes	Yes	NA	Yes	Yes
Self-sampling by permit holders	NA	NA	Yes	No	Yes	NA	Yes	Yes
Sampling procedures	NA	NA	Yes	No	Yes	NA	No	Yes

TABLE 17

Needs assessment for monitoring and sampling

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Training in sampling techniques	Yes	Yes	Yes	No	No	NA	Yes	Yes
Quality assurance	Yes	Yes	Yes	No	No	NA	Yes	Yes
Use of small monitoring	Yes	Yes	NA	No	Yes	Yes	Yes	NA

TABLE 18

How is compliance assessment measured?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
By permitting authorities	Yes	Yes	Yes	Yes	No	Yes	Yes	NA
Self-monitoring by by industry	Yes: not really enforced	NA	Yes	Yes	No	Yes	NA	Yes
Inspectorate investigations	NA	NA	NA	Yes	No	Yes	Yes	Yes
Evaluation of complaints	Yes: some	NA	Yes	Yes	No	Yes	Yes	Yes
Investigations of different environmental elements	Yes: some	NA	NA	No	No	NA	Yes	Yes

TABLE 19

Compliance assessment needs

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Strategy for compliance alliance	Yes	Yes	Yes	No	Yes	NA	NA	NA
Compliance Indicators	Yes	Yes	Yes	No	Yes	NA	NA	Yes

TABLE 20

What are the major enforcement tools of the inspectorates/agencies, and to what extent are they applied?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Number of fines per year	10	NA	1,800	161	NA	NA	44	Yes
Amount of fines collected (EUR)	7,000	NA	1,700,0000	150,000	NA	NA	0	Yes
Number of court cases won	0	NA	120	240	2-3 per year	NA	NA	Yes
Improvement of the state of the environment	NA	NA	NA	Yes	NA	NA	Yes	Yes
Annual performance reports	NA	NA	Yes	Yes	NA	Yes	Yes	Yes
Peer reviews	NA	NA	NA	Yes	NA	NA	NA	Yes

TABLE 21

Needs assessment for enforcement indicators and reporting capabilities

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Annual report writing	Yes	Yes	NA	Not yet	No	NA	Yes	Yes
Credibility testing or peer reviews	Yes	NA	Yes	Not yet	No	NA	Yes	Yes

Annex: **Compiled Checklists from Country Profiles**

Chapter 1

QUESTION 1:

Existence of various administrative bodies

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Single minstry dedicated exclusively to the environment	Yes	No	Ministry of Environment and Water	Yes		No	No	Environment and water in one ministry (MAPM)
Environmental Ministry combined with other related ministries	No	Yes: plus physical planning ESC			Yes	Yes: plus Ministry of Health	Yes: plus Ministry of Physical Planning	
Single environmental inspectorate/ agency or regional environmental inspectorates	Yes	No: future EPA under ESC	Yes	No	Yes	No	Not yet established	42 county environmental protection inspectorates, Bucharest municipality MAPM
Environmental agency combined with other related agencies	NA	No		No	No	No	No	No
Environmental research institute	No			No			Yes	Yes

LEGEND: NA = Not Available/Not Applicable
Blanks = not known/already covered in previous answers

QUESTION 2:

With what is the Ministry of Environment involved?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Policy	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Strategy	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Standards	Yes	Yes	Yes	Yes		No	Yes	Yes
Guidelines	Yes			Yes		No	Yes	Yes
Permits for all industries	Yes	No	Yes	Yes		Yes	Yes	Yes
Big industries	Yes	Yes					Yes	
Small industries	Yes	No					Yes	
No industries	Yes			Yes			Yes	
Compliance checking	Yes	Yes		Yes			Yes	Yes
Enforcement	Yes	Yes	Yes	Yes		Yes	Yes	Yes

QUESTION 3:

What tasks are undertaken by environmental protection agencies/inspectors?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Integrated permitting	Yes		Not yet				Yes	Not yet
Sectoral protection			No				Yes	Yes
Development of standards	Yes						Yes	
Guidelines	Yes		Yes				Yes	
Permitting of all industries	Yes						Yes	Yes
Permitting only big industries	Yes						Yes	
Small industries	Yes						Yes	
No permitting of industries	Yes						Yes	
Compliance checking	Yes						Yes	
Enforcement	Yes						Yes	Yes

QUESTION 4:

When did the following administrative bodies last review their framework laws and regulations?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Ministry of Environment	2001	2001	2001	2000	2000	2001-2002	2001	2001
Environmental agency	NA		1999					
Environmental inspectorate/agency	1998				2000			2001
Responsibilities of the inspectors	1996			1994			1996	2000
Laws on air pollution	Draft		2001	1995		1997	2001	1993, 1995, 2000 - 2001
Laws on water	Draft		1999	1995		1993	1997	1996
Laws on waste	Draft		2000	1995		1996	2000	2001
Laws on noise			1999	1990		1992	1995	1995, 1997
Laws on urban planning	1998		2001	2000		1997	2000	1991, 2000
Laws on soil	2000		2000			1994	1997	1995
Laws on energy	1995		2000	2001				NA

QUESTION 5:

How much time will it take to change or develop the following laws and regulations?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Basic environmental law	1 year		6-8 months	NA		New law in 2002	1-2 years	NA
Specific environmental laws	2 years		GMO 2002	NA			1-2 years	NA
Regulations within the framework	2 years			NA			6-12 months	NA
Standards	2 years		EU accession expected in 2007	NA			6-12 months	EU accession expected in 2007

QUESTION 6:

When did the following administrative bodies last review their framework laws and regulations?

Country	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Basic environmental law	Yes	Yes		Yes		Yes	No	
Specific sectoral laws	Yes		Yes: 4 river-basin directives	Yes			Yes	
Standards	Yes			Yes			Yes	Yes: underground water
Reorganising	Yes	Yes		No			Yes	

Chapter 2

QUESTION 7:

With which other bodies do environmental ministries/agencies/inspectorates or their regional offices cooperate?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Ministry of Interior and Police	Yes			Yes		Yes	Yes	Yes: plus inspectorate
Ministry of Water		Yes	Yes: within Ministry	Yes	Yes	Yes	Yes	Yes: within Ministry
Ministry of Agriculture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Directorate of Fisheries	Yes		Yes	Yes			Yes	Yes
Directorate of Forests/Nature	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Ministry of Health	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes: inspectorate
Ministries of Public Works/Tourism/ Physical Planning	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Ministries of Mining/Energy	Yes	Yes	Yes: agency	Yes		Yes	Yes	Yes: national companies
Academy of Science	Yes	Yes		No			Yes	
Port authorities	Yes			No		Yes	Yes	Yes
River catchment basins	Yes		Yes: for regional inspectorates	No			Yes	Yes
Communities/ municipality	Yes		Yes: on waste and water	No		Yes	Yes	Yes
Ministry of Defence				Yes			NA	Yes
NGOs	Yes	Yes	Yes	Yes			Yes	Yes: working group

QUESTION 8:

Do needs exist for the following?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
National inspectorate for an integrated approach to enforcement	Yes			Yes				
Integrated inspectorates covering all aspects of environmental health and protection	Yes			Yes			Yes	
National and regional coordination bodies for enforcement	Yes			Yes			Yes	
National investigation bodies for environmental crime	Yes			Yes				
A national institute for environmental research which serves inspectorates/agencies	Yes			Yes			Yes	

Chapter 3

QUESTION 9:

In what ways are inspectorates/agencies involved in the permitting process?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Integrated permitting	Yes	Yes			Yes		No	Yes: PHARE project
Compulsary advising	Yes		Yes: inspectorates			Yes	No	Yes
Free advising				Yes			Yes	Yes
Permit writing	Yes		Yes: inspectorate covers waste-water use	No			No	Yes
Approval of permits	Yes	Yes	Yes: inspectorate	No			No	Yes
Appeal procedures against permits	Yes			Yes			No	Yes
Public hearings on permits	No		Yes: inspectorate	Yes			Yes	Yes
Court hearings on permit appeals	No						Yes	Yes
Issuance of permits (if so, how many per year)	350		800 waste; 69 mineral resources; 2,500 imported/ exported animals; 1,692 dangerous substance imports; 12 imports of ozone depleting substances				190	42,656 total; 13,651 environmental agreements (32%); 29,005 environmental permits (68%)
Not at all				Yes			Yes	

QUESTION 10:

What are the needs of the inspectorate/agencies in relation to the permitting process?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
No involvement at all in the permitting process	No			No				
To improve advising capability and capacity	Yes		Yes	Yes			Yes	Yes
To improve compulsory advising capability	Yes			Yes			Yes	
Improving review process for permit applications	Yes			No				
More staff to check compliance with permits	Yes		Yes	Yes			Yes	Yes

Chapter 4

QUESTION 11:

What is available to inspectorates/agencies in compliance promotion and compliance checking?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Planned compliance promotion activities	NA	Yes	No	No			Yes	No
Ad hoc promotion activities	No		No	No			Yes	Yes
Annual compulsory compliance checking	No		Yes	Yes			Yes	Yes
Ad hoc compliance checking	Yes			Yes			Yes	Yes
Only complaint-driven compliance checking	No		No	No			Yes	No
Compulsory follow-up actions	Yes		Yes	Yes			Yes	Yes
Reporting obligation	Yes		Yes	Yes			Yes	Yes
Non-compliance response	Yes		Yes	Yes			Yes	No
Condoning strategy	No			No				No
Compliance checking for all environmental fields	Yes	Yes	Yes: noise by regional health inspectorates	Yes		No	No	Yes: noise by regional health inspectorates; radioactivity by Ministry of Water and Environment

QUESTION 12:

What are the needs regarding compliance checking and promotion?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Planning procedures	Yes	Yes		Yes			Yes	Yes
Communication skills for cooporation with other authorities	Yes	Yes		Yes			Yes	
Compliance promotion strategies	Yes		Yes				Yes	
Code of conduct for compliance checking/promotion	Yes		Yes				Yes	
Condoning strategy	Yes		Yes	No				
Non-compliance response strategy	Yes	Yes		Yes			Yes	

Chapter 5

QUESTION 13:

What is available to inspectorates/agencies in enforcement?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Annual planning of enforcement actions	NA	Not yet	Yes	Yes		Yes	Yes	Yes
Enforcement strategies/ condoning	No	Not	No	Yes			Yes	Yes
Can impose penalties and collect fines	Yes	Not	Yes	Yes			Yes	Yes
Court actions	Yes	Not yet	Yes	Yes		Yes	Yes	Yes
Power of prosecution	No		No	Yes			Yes	No
Right to appeal court decisions	Yes		Yes	No			Yes	Yes
Protection from liability the state	No		Yes	Yes			Yes	Yes

QUESTION 14:

What are the powers of inspectorates/agencies in enforcement?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Right to make site inspections unannounced	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Can summarily close factories/parts of factories	Yes		Yes	Yes		Yes	Yes	Yes
Can impose penalties and collect fines	Yes	Yes	Yes				Yes	Yes
Can call for police assistance	Yes		Yes	Yes			Yes	Yes
Can check accounting and bookkeeping	No		No	Yes			No	No
Can file administrative charges	Yes		Yes	Yes			Yes	Yes

QUESTION 15:

What are the needs of inspectorates/agencies for executive powers?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Technical training in enforcement practices	Yes	Yes	Yes	Yes			Yes	Yes
Training in relevant legislation	Yes	Yes	Yes	Yes			Yes	Yes
Human-resources management	Yes	Yes	Yes	Yes			Yes	Yes

Chapter 6

QUESTION 16:

What are the executive powers of inspectorates/enforcement agencies?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Inspectors	42		400 (of 677 total personnel)	33		39	4	1,883 for 42 county inspectorates; 400 for enforcement
Inspections (per year)	1,000		14,600	2,850	950	4,560	231	About 150,000 total (or 100,000 for enforcement) and 50,000 for permit compliance checks
Biologists (staff %)	20		NA			12.5	0	Not yet
Technical personnel (staff %)	20		NA			45	75	Not yet
Chemistry experts (staff %)	20		NA			5	0	Not yet
Lawyers (staff %)	4		NA	0		2.5	0	Very Low
Experience (years per staff member)	15		NA			18	20	NA
Training of management (weeks per year)	2		NA	No			0	3-4 days per inspector
Training of staff (weeks per year)	3		NA	1		1	0	3
Budget management	No		NA	No			0	NA

Chapter 7

QUESTION 17:

How efficient are the inspecorates/agencies?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Court cases/visits	0%		NA	1.5%		2%	0.87%	1.3%
Written reports/visits	100%		NA	100%		10%	100%	100%
Portion of visits initiated by complaints	50%		NA	40%			16.45%	1-2%
Percentage of court cases won	0%		NA	55%		NA	NA	40%
Inspection days per year (per inspector)	200		NA	120		140	250	Approx. 200

QUESTION 18:

What would inspectorates/agencies need to improve staff performance?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Development of indicators	Yes		Yes	Yes			Yes	Yes
Training in writing reports	Yes			No			Yes	
Training in relevant legislation	Yes		Yes	Yes			Yes	Yes
Training in site visits	Yes	Yes	Yes	Yes			Yes	Yes
Development of investigative skills	Yes			Yes			Yes	Yes

Chapter 8

QUESTION 19:

Which data-storage-, retrieval- and archive systems are available?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Paper archives	Yes	Yes		Yes		Yes	Yes	Old databases only
Electronic storage	NA	NA	Yes: plus paper archives	Yes		Yes	No	Yes
Intranet	NA		Some	No		NA	NA	NA
Specific databases on waste	NA		Being developed	No		Yes	Yes	Yes
On chemicals	NA		No	No			Yes	Yes
On Industries	NA		Yes	No			Yes	Yes
On permits	NA		Yes	No			Yes	Yes
Public access to data	NA		Yes	No			Yes	Yes

QUESTION 20:

What are the needs concerning data storage and retrieval?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Database software	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Training in use of databases	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Computer hardware	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Industrial activities inventory	Yes	Yes	Yes	Yes		Yes	Yes	

Chapter 9

QUESTION 21:

What are the needs concerning data storage and retrieval?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
State of the environment	Yes		Yes	Yes			Yes	Yes
Industry self-monitoring data on permit compliance	Yes		Yes	Yes			Yes	Yes
Industry self-sampling data	NA		Yes	No			Yes	Yes
Sampling procedures	NA		Yes	No			No	Yes

QUESTION 22:

What are the needs regarding monitoring and sampling?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Training in sampling techniques	Yes	Yes	Yes	No			Yes	Yes
Quality assurance	Yes	Yes	Yes	No			Yes	Yes
Use of small monitoring equipment	Yes	Yes		No		Yes	Yes	

Chapter 10

QUESTION 23:

How is compliance assessment measured?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
By consulting permit authorities	Yes	Yes	Yes	Yes		Yes	Yes	
From self-monitoring data by industry	Yes: not really enforced		Yes	Yes		Yes		Yes
Self-regulation	NA			Yes		Yes	Yes	Yes
Complaint evaluations	Yes: some		Yes	Yes		Yes	Yes	Yes
Theme investigations	Yes: some			No			Yes	Yes

QUESTION 24:

What are the needs in compliance assessment?

Country	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Strategy on compliance assessment	Yes	Yes	Yes	No				
Compliance	Yes	Yes	Yes	No				Yes

Chapter 11

QUESTION 25:

What are the major performance gauges for inspectorates/agencies?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Number of fines/year	10		1,800	161			44	Yes
Amount of fines collected (EUR)	7,000		1,700,000	150,000			0	Yes
Number of court cases won	0		120	240		NA	NA	Yes
Environmental Improvement	NA			Yes			Yes	Yes
Annual reports showing performance	NA		Yes	Yes				Yes
Peer reviews	NA			Yes				Yes

QUESTION 26:

What are the needs for enforcement indicators and reporting capabilities?

	Albania	BiH	Bulgaria	Croatia	FYR Macedonia	Republic of Serbia	Republic of Montenegro	Romania
Annual report writing	Yes	Yes		Not yet			Yes	Yes
Credibility-testing peer reviews	Yes		Yes	Not yet			Yes	Yes

Country Profiles

- Albania
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Country Profile: **Albania**

Prepared by
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February 2002

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Country Profile: **Albania**

Introduction

This report analyses the enforcement of national environmental law in Albania; namely, the obstacles to effective enforcement and any opportunities for improvement. The authority and responsibilities of the Ministry of Environment (MoE) and other governmental institutions concerned with the environment will be discussed. The legal framework and its implementation by the Environmental Protection Inspectorate (EPI) will be described along with the permitting system. Afterwards, the report looks at the MoE's compliance control procedures and enforcement tools. We will also examine the EPI's organisational structure and resources, and the obstacles it faces in using its enforcement tools. The chapter then discusses measures taken to overcome these obstacles.

The second part of the report looks at how the EPI works in practice: how many inspectors it has and how frequently they make site visits, how many court cases the Inspectorate pursues, its financial needs and budgeting process, etc. This part also examines the MoE's data storage and retrieval system as it relates to enforcement and implementation of environmental laws, regulations and policies. It also identifies system bottlenecks and any decongestive measures. A description of the monitoring systems and inspection powers available to the public is also included. The report tries to balance any discussion of Environmental Protection Agency (EPA) and enforcement-system shortcomings with positive examples and innovations.

Administration

Albania's MoE was established in September 2001 with a structure and mission similar to the now defunct National Environmental Agency (NEA). The MoE operates on the basis of the Law on Environmental Protection, including amendments made in 1998: the same law established the Committee for Environmental Protection (CEP) in 1993 and the NEA in 1998.

The legal framework for the establishment and operation of the EPI is as follows:

- the Law on Environmental Protection, No. 7664, dated January 21, 1993;
- a set of amendments to the Law on Environmental Protection, No. 8364, July 2, 1998;
- the Decision of the Council of Ministers on restructuring the Committee for Environmental Protection, No. 421, dated August 17, 1993.

The Decision of the Council of Ministers on the Establishment of Regional Environmental Agencies at the district level, No. 599, dated December 20, 1993, sanctioned and further developed the newly established EPI by extending its activity to all parts of the country and delegating some of its authority to local jurisdictions.

According to these laws and regulations, the EPI operates as part of the MoE. It consists of the chief inspector and national inspectors, as well as other inspectors of regional environmental agencies.

This means that the EPI is not a separate body of the MoE. This body has been, since the establishment of the national environmental management system, an integral part of the MoE and its predecessor institutions, the CEP and NEA.

The MoE's structure (which appears in the annex) was approved in October 2001 by the Prime Minister. In January 2001, the NEA started an institutional reform process, also approved by the Prime Minister. In this context, the ministry's structure was based on that of the NEA, which was approved in February 2001 during the first phase of its institutional reform.

Thus, the EPI's tasks had to be carried out by a team of inspectors, who were members of the ministry's technical directorates and Regional Environmental Agencies (REAs).

Until January 2001, REAs were run by the NEA's Directorate of Services, Administration and Human Resources. In the new structure, a new directorate was established: the Directorate of Environmental Impact Assessment and Information. One of the most important charges of this directorate is the EPI.

The Directorate deals specifically with:

- day-to-day EPI management;
- identification of top-priority environmental problems to be considered by inspectors;
- preparation of drafts of environmental permits;

- organisation and coordination with other directorates concerning site visits for inspections;
- assistance with REA tasks;
- verification of compliance with REAs;
- assessment of inspectorate performance;
- planning of inspections and controls regarding pollution sources;
- elaboration of guidelines to facilitate the environmental permitting system; and
- serving as secretariat of the Environmental Permitting Commission.

Since the CEP once belonged to the Ministry of Health and Environment, some regulations regarding the tasks, competencies and rights of environmental inspectors have not been updated or changed.

Based on the Regulation on Competencies of Inspectors for Environmental Protection, No. 4341, dated December 4, 1996, issued by the Minister of Health and Environment, the inspectors for environmental protection served the MoE nationwide, and REAs within their district jurisdictions. They are nominated by the Minister to perform the following:

- investigate compliance with environmental laws and regulations;
- cooperate with other state authorities, such as the Sanitation Inspectorate, Forestry Inspectorate and State Police;
- regularly monitor activities affecting the environment;
- inform local authorities and the central government about environmental concerns;
- take notes, keep records, issue orders and propose different measures for improvements, clean-ups or remedial responses to environmental pollution or damages; and
- impose administrative sanctions on violators of laws and/or permit conditions.

According to 1998 amendments to the Law on Environmental Protection, the chief inspector for environmental protection and the NEA president are members of the Council for National Territorial Adjustment. REA inspectors in all districts are members of their own local councils for territorial adjustment.

According to regulation No.5 of the CEP chairman, dated January 9, 1997, REAs must plan and carry out inspections of various activities within their jurisdictions, and enforce all applicable laws and regulations.

The Minister of Environment defines the duties, rights and authority of the EPI.

The MoE grants environmental permits for industrial activities. Plants and facilities are prohibited by law from operating or carrying out activities without an environmental permit. In this regard some progress has been made in recent years. The number of industrial facilities or plants operating without required permits has decreased over the last year. The process is integrated so that just one permit is needed to set the conditions for protection of air, water, soil and, in some cases, biodiversity.

The MoE is responsible for formulating and enforcing policy and legislation. The MoE plays an important role in assisting and cooperating with other ministries and local governments to produce environmental-sector policies.

The MoE carries out its enforcement function through the EPI in all parts of the country.

The basic Law on Environmental Protection was last amended in 1998. Separate laws were passed on noise in 1988, energy in 1995, soil management in 2000, urban planning in 1998, and inspector competency in 1996.

Draft laws on air, water, waste, protected areas and biodiversity are in the consultation process and await approval.

Albania has committed itself to work conscientiously on the legal framework for water, air and waste management. The passage of a law is a long process, and is not enirely in the hands of the MoE. In Albania, it takes two years on average for a law to go from formulation to adoption. Adoption of all the regulations stemming from a law takes even longer.

Institutions Connected to the Environmental Protection Agency

Twelve inspectors work at the MoE on a national level and belong to the ministry's technical directorates. They cooperate closely with REAs and the Directorate of Environmental Impact Assessment and Information to manage and carry out inspection tasks.

Twelve REAs, with a total of 30 inspectors, have been established at the prefecture level. Their main functions are:

- overseeing enforcement of environmental laws;
- following preparatory procedures for environmental permits; and
- collecting and maintaining environmental information at district and regional levels.

The REA network consists of the following prefectures and jurisdictions:

- Tirana (Tirana, Kavaja districts);
- Durres (Durres, Kruje districts);
- Shkoder (Shkoder, Malesi e Madhe, Puka districts);

- Lezha (Lezha, Kurbini districts);
- Kukesi (Kukesi, Tropoja districts);
- Dibra (Dibra, Mati districts);
- Elbasani (Elbasani, Peqini, Librazhdi, Gramshi districts);
- Korca (Korca, Pogradeci, Kolonja districts);
- Fieri (Fieri, Lushnja, Mallakastra districts);
- Berati (Berati, Skrapari, Kucova districts);
- Vlora (Vlora, Saranda, Delvina districts); and
- Gjirokastra (Gjirokastra, Permeti, Tepelena districts).

To assure an integrated approach of controls and inspections, the laws and regulations mentioned above require that the EPI should coordinate its work with other inspectorates and law enforcement agencies.

The MoE and EPI operate in conjunction with several other ministries and institutions, and they handle particular aspects or sectors of environmental management. The main ministries and institutions are briefly described below.

Ministry of Agriculture and Food

In accordance with a law dated July 19, 1991 (amended by law No. 7715, dated June 2, 1993), the Ministry of Agriculture and Food (MAF) is in charge of monitoring compliance with rules concerning the collection and deposit of waste containing chemicals harmful to farmland, vegetation or water. The MAF has the right to impose fines.

The General Directorate of Fisheries (GDF) looks after the fisheries of marine, coastal and fresh-water habitats. The GDF develops programmes and regulations for better management and sustainable use of fisheries. The Fishery Inspectorate has been recently established for this purpose.

The General Directorate of Forestry and Pastures (GDFP) is responsible for general policy concerning the technical and administrative aspects of managing forests (exploitation, deforestation, reforestation), national parks, protected areas and hunting grounds, in accordance with Law No. 4407 of June 25, 1968 (modified by Law No. 6727 of January, 29 1983), Law No. 7623 of October 13, 1992 redefined its functions.

As part of its protection efforts, the GDFP administrates a dedicated law enforcement branch and forest ranger service. The GDFP is also charged with the administration of pastures and grazing land.

In accordance with Law No. 8405, dated September 17, 1998, REAs control the release of construction permits, but do so jointly with the GDFP in areas classified as forests, parks or otherwise environmentally important.

The GDFP and its district branches are also in charge of issuing hunting permits. The GDFP defines which species can be hunted, sets bag limits and establishes the duration of hunting seasons.

An important part of institutional reform within the GDFP was the recent establishment of the Protected Areas Directorate and Community Forest and Pastures Directorate.

Ministry of Health

The State Sanitation Inspectorate was established by Law No. 7643, dated December 2, 1992, and vested with wide-ranging powers on the protection of human health, including the enforcement of laws and regulations on hygiene and sanitation. The inspectorate monitors the application of hygienic and health standards for the workplace, as well as those applying to citizens. It enforces standards for drinking water and food and can intervene in the case of violations at commercial operations.

The inspectorate can cease production, transport, storage or sale of food products and beverages if they constitute a danger to public health. It may prohibit the consumption of drinking water when limits for chemical pollutants or bacteria are exceeded.

Controls are carried out by inspectors at the Ministry of Health and at the district level, and they are empowered to impose fines on violators.

The Directorates of Public Health, administratively attached to local authorities, carry out controls and monitoring at the local level. The directorates handle the following matters under the supervision and guidance of the Institute of Public Health (IPH):

- controls on levels of toxic substances in the air (particularly in urban areas), and in water (including surface water);
- management of drinking water and water-supply systems;
- control of sewerage systems;
- control of construction sites and public works projects; and
- oversight of application of public health regulations, including work safety regulations in all sectors.

The IPH and Directorates of Public Health monitor environmental pollution caused by radioactive substances and take measures to protect workers handling such material, including emergency care in industrial exposure cases and establishment of benefits to people suffering from chronic diseases caused by radiation.

Both authorities are required to monitor toxic emissions into the air, water and soil upon request of the MoE.

Ministry of Public Works and Tourism

The Ministry of Public Works and Tourism oversees the construction permitting system, although permits for specific projects are issued by local and national land planning commissions. The Law on Urban Development, approved in 1998, requires that an environmental impact assessment (EIA) is carried out before any decision is taken on a land-use proposal.

A construction police force was established by Law No. 7752, dated March 28, 1993, to ensure compliance with conditions set out in construction permits. In recent years, the construction police have been charged with the dismantling of illegal structures in protected urban and natural areas and to regulate the extraction of inert materials in river beds. This is an important responsibility in the field of environmental protection and inspection.

Academy of Sciences

The MoE and the Academy of Sciences are closely linked.

The Academy of Sciences is in charge of conducting environmental studies. A number of research institutes operate within this structure — the main ones related to environment being the Institute of Hydro-Meteorology, the Institute of Biological Research and the Centre of Geographical Research.

These institutes play an important role within the environmental programme (monitoring air and water quality, taking inventories of biodiversity, etc). They also keep records of partial cadastres, maps, databases and analyses.

Research Institute of Chemical Technology

This institute carries out studies concerning fluid discharges existing in urban areas or caused by industrial operations.

Port Authorities

Port authorities inspect incoming boats and can refuse access to vessels that do not meet requirements adopted for the protection of seawater. Port authorities can impose fines. The MoE has submitted to the government a draft law on the protection of the marine environment from pollution and damage. It contains a separate disposition about cooperation between port captains, REAs and MoE inspectors.

Basin Management Councils

The Drainage Basin Councils are local bodies responsible for managing water resources. A basic council has been established for all of Albania's river basins, or groups of river basins. They work with the technical secretariat of the National Water Company. Much cooperation is expected between these councils and the REAs in the field of water use and river basin management.

Communities and Municipalities

In accordance with Article 42 of the Law on Environmental Protection, No. 7664, dated January 21, 1993, the councils of communities, municipalities or districts and their relevant administrative units are charged with:

- implementing the law and the acts of the Council of the Ministers on environmental protection issues at the local level;
- taking measures to ensure the protection and rejuvenation of the environment;
- explaining and publishing materials about environmental protection programmes, in cooperation with competent authorities;
- monitoring the environmental situation;
- informing the public of the environmental situation and any local activities that are subject to environmental impact assessments;
- managing and distributing local environmental funds according to the law; and
- designating appropriate sites for the disposal and processing of industrial and domestic waste.

In accordance with Article 26, Paragraph 2 of the Law on Water Resources, No. 8093, dated March 21, 1996, communities, municipalities and other public or private institutions with their own water supply systems must frequently check their supply quality. The water authority may interrupt distribution when quality standards are not met.

In 2001, a new law on local authorities was approved with the aim of decentralisation of competencies from central authorities to local ones. The law has created a need for follow-up legislation that better defines the environmental responsibilities of local authorities.

NGOs

The role of non-governmental organisations (NGOs) and citizens for the protection of the environment and biodiversity is becoming more and more important. There are 75 environmental NGOs in Albania, all of which were established after 1991. Their activity has gradually expanded throughout the country, and they are currently setting up a forum to better coordinate and plan their activities. However, the environmental

NGO movement is still weak, and its impact on society and the general public is limited. Some of the reasons are as follows:

- lack of experience;
- lack of financial and material resources (most NGOs are donor-driven);
- concentration of work in the hands of a few;
- insufficient coordination of joint activities between NGOs;
- concentration of activities in big cities; and
- relatively low level of environmental awareness among general public and policy-makers.

The activity of NGOs in the field of environmental monitoring and inspection is negligible.

Needs are identified as follows:

- cooperation with ministries and other inspectorate bodies; and
- periodic and regular exchange of information, joint actions, mutual communications and adherence to an integrated enforcement approach.

Environmental Permitting System

The need for a system of permits for activities potentially harmful to the environment was first mentioned in the Framework Law on Environmental Protection. Improvements to the system were stipulated in 1998 amendments to the framework law. The law authorises state administration bodies or local authorities to issue permits to natural and legal persons for activities affecting the environment, but only after the MoE has issued an environmental permit for that activity.

Natural and legal persons who engage in economic and social activities that might affect the environment are obliged to apply for an environmental permit from the designated authorities — either the MoE or the Council of Ministers of Albania.

Permits are issued by the MoE for the following economic and social activities:

- construction or operation of certain facilities of local or national interest;
- local and national programmes and plans for land use and urban development;
- construction of roads, railways, seaports, hydro-electric plants, other industrial activities, land reclamation, and projects governing the improvement of surface water courses;
- exploration, extraction or exploitation of natural surface and subsurface minerals and resources;
- exploitation of mineral or biological resources in waters intended for fishing — taking into account species, seasons, means and fishing quotas;
- exploitation of forests that are of common interest, creation of forested areas and hunting — taking into account species, seasons, means and hunting quotas;
- exploitation of flora, fauna, natural resources, coastal zones and sea beds;
- opening new areas for growing fruit in zones with protected water resources;
- production, sale or use of toxic products, as well as those to be used for phyto-sanitarian, agricultural and silvicultural purposes;
- the import and export of plants and animals;
- other activities that, according to the MoE's determination, may have an impact on the environment.

The Council of Ministers is in charge of permitting for the following activities:

- import and export of toxic substances, and the transportation of toxic substances through Albania; and
- the manner of transportation, and the site of deposit, processing or disposal of toxic and hazardous wastes.

The permitting procedure is as follows:

- Environmental permits are issued at the request of the natural or legal person, based on technical documentation and analysis of the impact on the environment presented by the applicant.
- The applicant submits the request with other required documents to the local REA.
- The REA prepares an opinion regarding the request or may issue a denial, based upon initial review of documentation and site inspection. If the REA approves the proposal, the request and the REA's opinion is forwarded to the MoE.
- The technical directorates of the MoE prepare a draft permit and forward it to the Permitting Commission for discussion and decision-making. The MoE chairs the Permitting Commission.
- If the request is approved, the permit is issued within three months of the request, and is valid from the time the activity starts until any changes are made in the environmental conditions under which the permit was granted.
- The competent authorities may postpone the granting of a permit for up to six months if conditions are not satisfied.
- The authorities are obliged to either grant or deny a permit within this sixth-month period; otherwise the permit is considered approved.

- Environmental permits become invalid if the activity does not start within a year from the granting of the permit. If this is not complied with, it may be necessary to re-apply for a new permit .
- The relevant authorities may reconsider or revoke a permit if new, previously unknown ecological considerations are revealed at the time the permit is granted, or if new legislation on the environment is passed. In this case, the MoE in cooperation with other ministries or institutions, taking into account the nature of the activity, shall set a deadline by which the conditions for obtaining a permit must be satisfied.
- The total number of permits granted annually is about 350.
- Permits are integrated — addressing all environmental concerns in a single document.

By law, the studies and environmental impact assessment presented by the permit applicant, as well as the approval of the permit-granting procedure by the relevant authority, are subject to MoE approval.

Applicants receiving environmental permits have to pay a fee set by the MoE. The fee is to be paid into the account of the authority that grants the permit. Applicants who invest in the environment shall be exempt from this fee. The MoE — in collaboration with other relevant ministries and institutions — determine which investments qualify.

The number of environmental permit applications has been growing since 1993, not only because of economic growth, but also because of increased state and MoE authority. On average, more than 350 permits per year are issued in various sectors, industries and services. The MoE has established a very detailed list of activities requiring environmental permits.

Despite this, the permitting system still has basic deficiencies. The MoE prepares integrated permits addressing all aspects of the environment, but in a very simple one-page document. The conditions to be met by the applicants are not detailed enough. There needs to be new standards for permissible emissions and emission controls. There is very limited capacity and too little manpower to write high-quality, realistic permits. There are no special guidelines for permit writing in different sectors. Some improvement has been achieved due to the implementation of a project entitled "COP 97 Institutional Strengthening of the PHARE Programme". However, improving the environmental permitting system remains a big challenge for the MoE.

Identified needs are as follows:

- more capacity to draft good permits;
- more capacity to provide advice to permit holders;
- more capacity to review and analyse permit applications, including the environmental report prepared by the applicant; and
- additional manpower to draft and inspect permits.

Compliance Control and Promotion

Environmental regulation is the duty of the MoE and its regional agencies, other ministries and central institutions and local authorities. This is an ongoing task, taking into account observed parameters and causes of pollution and environmental damage. Regulatory control over the sources and causes of pollution and environmental damage is generally exercised:

- by means of a legal act adopted by relevant bodies (the MoE and its regional agencies, other ministries and central institutions and local authorities); and
- at the request of companies, environmental organisations or individuals who are affected, or may be affected, by pollution and environmental damage.

When environmental pollution or damage is verified, the expenses of enforcement or amelioration are borne by those responsible for the pollution or damage.

Any punitive decision taken by the authority, including the amounts of fines, is final.

Depending on the circumstances, the agency with jurisdiction in the matter may decide to prohibit or temporarily interrupt (totally or partially) the activities of those who have caused pollution or damage. The agency may also order the offender to take steps to solve the problem.

Enforcement is weak in Albania due to objective and subjective reasons. Inspections of industrial sites are not very well standardised, planned or carried out. Inspection offices are under-staffed and have no proper measuring equipment. Ignorance of industrial processes, cleaner production methods, end-of-pipe technology and environmental-impact assessment are some of EPI's biggest problems.

Compliance Promotion

Albania has not implemented a programme to encourage voluntary compliance with environmental laws. However, the subsidiaries of big foreign companies do have such programmes.

The use of financial incentives to this end does not apply. Those who cause damage to natural resources are compelled to pay compensation. Victims of pollution or environmental damage may submit claims for compensation to the court.

The MoE has no ongoing campaign to encourage

voluntary compliance with environmental laws. It carries out ad hoc promotions for its strategic goals, but its compliance inspections are mostly complaint-driven, save for a compulsory annual check-up. Inspectors are required to write up reports of their findings.

To improve environmental promotions, the MoE must:

- develop planning procedures for compliance checks;
- develop communication skills and tools with other bodies;
- prepare an action plan for compliance promotion, compliance strategy and a non-compliance response strategy; and
- establish a code of conduct for compliance.

Compliance Enforcement

Illegal activities and permit violations may result in full closure, prohibition of any given activity or temporary suspension by the relevent authority.

Violators who fail to comply with the conditions set out in an environmental permit are obliged to satisfy them within a period determined by the inspectors in collaboration with other ministries and central institutions.

Non-complying activity that continues beyond the set deadline, depending on the circumstances, can be, prohibited or temporarily interrupted by the relevant authority.

Indemnity for damages resulting from trans-boundary pollution and environmental damage is arranged in accordance with international agreements, conventions and treaties in which the Republic of Albania is a party. In cases where it is not a party, a solution is arranged in a manner consistent with generally accepted principles and norms of international rights in the environmental field.

Infractions not considered criminal acts are considered administrative violations of an environmental nature. These include:

- unlicensed transportation of hazardous waste or substances through Albania or its territorial waters;
- import of hazardous waste or substances for the purpose of preservation, storage or disposal;
- violation of insurance rules defined by the MoE when transporting hazardous waste or substances;
- failure to meet deadlines for the submission of data on the environmental situation;
- failure to include information on the environmental situation, including a contingency plan for how citizens should respond if the activity harms the environment;
- failure to inform the public of environmental pollution or damage, the measures taken to contain or remedy the damage, and how citizens can best avoid harm;
- failure to provide buyers or customers with relevant information about hazardous goods and services and their possible adverse effects and impacts;
- objection to or failure to perform an environmental impact assessment;
- failure to provide required documents to the authorities responsible for environmental impact assessments;
- engaging in activities that can affect the environment without obtaining a permit from the relevant state authority;
- violation of admissible limits of pollutants, as defined by the MoE; and
- violation of regulations for the storage, transport, preservation or disposal of hazardous waste or substances identified by the MoE.

In addition to fines, the authorities may revoke permits or seize properties that cause damage to the environment.

MoE inspectors and their district REAs may impose fines for administrative violations. MoE and REA inspectors, or other employees with special authorisation, have the right to impose fines for any administrative contravention. If fines are not paid on time, the consequences outlined in the citation must be faced according the administrative code.

The main difficulty in environmental enforcement is the collection of fines, which is sometimes impossible. Because the law specifies no penalties for non-payment, an amendment should be made stressing that failure to pay will result in immediate suspension of the offending activity. The non-collection of fines has had a demoralising effect on MoE inspectors, and has damaged their public credibility. The number of fines, however has significantly declined since 1997.

As mentioned earlier, the EPI collaborates with state police when cited polluters resist implementing inspectorate-mandated measures. According to the Regulation on the Cooperation of Environmental Inspectors with State Police and Forestry Service Police, No. 68, dated March 27, 1997, signed by the Minister of Health and Environment, the Minister of Public Order and the General Director of Forestry and Pastorate, environmental inspectors enlist the help of state police or forest rangers when:

- cited individuals resist or do not comply with orders or inspectors; and
- substantial pollution levels or environmental damages are verified in forests or protected areas due to forbidden activity, and the damages are considered a criminal violation.

Conclusion

The main authorities that have at least some responsibility for enforcing environmental protection laws are the:

- EPI;
- customs officials;
- sanitation inspectorate;
- forest rangers;
- construction police;
- veterinary inspectorate;
- municipal police;
- finance police;
- hydrocarbon inspectorate; and
- fishery inspectorate.

If a violation is identified and recorded, these bodies can make an administrative response or impose a fine or order to be complied with by a certain deadline.

In cases of repeated violations, the possible penalties are:

- temporary shut-down of operations;
- a proposal for temporary shut-down;
- a proposal for a permanent closure; or
- permanent closure.

It is very important for the various inspectorates dealing with different aspects of environmental protection to cooperate. Exchanging information is indispensable and will make their work easier.

Environmental inspectors conduct both announced and unannounced site visits — sometimes closing down polluters, imposing penalties and/or cooperating with state police.

The needs are as follows:

- training in enforcement practices;
- preparing a job manual for inspectors;
- legal training and increased standard awareness;
- training in the use of inspection equipment;
- training in how inspectors work; and
- establishment of a PRTR (or, pollutant registry) — either for each facility or at the district level.

Environmental Protection Inspectorate Organisation, Human Resources and Training

EPI activities are coordinated by the Directorate of Environmental Impact Assessment and Information. There are 42 inspectors, and their pay scale is the same as for the other state budget employees. They are poorly equipped, which makes their work difficult.

Inspectors lack computers, inspection equipment, cars and other facilities. To increase their efficiency, it is less urgent to hire more inspectors than to provide existing ones with proper equipment.

Very little time has been devoted to professional training, and it has been limited in scope.

Most training has been organised under the PHARE programmes of 1993-1996, and somewhat in 1997, while other courses were organised by the United States Environmental Protection Agency. Most inspectors have degrees in bio-chemistry or chemical engineering due to the lack of environmental university curricula. Among the MoE staff, 20 percent are biologists, 20 percent technicians, 20 percent chemists and about 4 percent lawyers. Staff members have an average of 15-years' experience, eight of those in the environmental field. The MoE plans and directly manages the EPI budget.

There is an urgent need for serious and continuous training. **The needs are as follows:**

- continuous and professional training in the field of inspectorate management, inspection planning, inspection execution, etc; and
- monitoring equipment, cars, communication equipment, etc.

Environmental Inspection in Practice

During the first six months of 2001, more than 520 inspections were recorded by REA inspectors. The number of inspections per inspector ranges from three to 17 per month. During inspections, requirement tasks for violators are recorded and deadlines for their implementation are set. Permit conditions are the weakest point of the Albanian inspectorates.

Fines have been imposed, but not collected. Violators appeal to the court and, unfortunately, they win. This is mainly because environmental permit conditions and inspection records are not clear, due to the lack of a proper system — meaning the inspectors' cases do not stand up in court. Drastic improvement is needed as soon as possible.

Regarding other inspectorate bodies, cooperation remains weak on the national level, whereas joint inspections at the district level are better organised.

Inspectors prepare reports on each site visit. About 50 percent of these visits are prompted by complaints. There are about 1,000 visits per year. To date, no environmental inspector has ever filed a court appeal against a suspected violator.

The needs are as follows:

- development of indicators;
- better report writing; and
- training in laws and site visits, communication and advisory skills.

Data Storage and Retrieval Systems

The environmental information system is weak in Albania. There is no electronic database about environmental permits and EPI activity. In 2001, an information centre was established at the MoE. The centre will become the home of data-storage and retrieval system.

The needs are as follows:

- electronic data storage;
- intranet;
- specific data on waste, water, chemicals, industries and permits;
- public access to data;
- database software;
- industrial activity inventory; and
- computer and database training.

Monitoring and Sampling, Access to Information

The legal obligation for environmental monitoring derives from two acts: the Law on Environment Protection, No. 7664, dated January 21, 1993, and the Law on State Sanitation Inspectorate, No. 7643, dated December 2, 1992. According to the Decision on the Tasks of Ministries, Central Institutions, and Legal and Physical Persons for Environmental Monitoring, the responsibility of air monitoring is delegated to institutes and local laboratories in different districts as follows:

- The Public Health Institute should monitor drinking-water quality, urban wastewater quality, microbiological pollution and air quality in urban areas.
- The Hydrometeorological Institute is responsible for monitoring surface-water quality and air quality nationwide.
- The Soil Studies Institute monitors soil quality, soil fertility, soil pollution levels and irrigation-water quality.
- The Institute of Chemical Technology Studies and Research monitors industrial wastewater and industrial and municipal solid waste.
- The Museum of Natural Science and the Institute of Biological Research are responsible for monitoring biodiversity and matters related to genetically modified food.

The MoE has been implementing a national monitoring programme for two years on the basis of DPSIR indicators. Albania needs an up-to-date monitoring network, not only to properly assess the state of the environment in qualitative terms, but also to identify the source of any pollution. Better knowledge of pollution sources will assist the formulation of an efficient inspection programme, as well.

Regarding access to environmental information, the MoE publishes a report on the state of the environment once every two years, and has a website.

While environment conditions are monitored in Albania. inspectors do not take their own sampling, and are unfamiliar with sampling procedures. Self-monitoring by industrial operators is required, but very rarely practiced. **The needs are follows:**

- training in sampling and sampling procedures, quality assurance programmes, and;
- training in the use of compact monitoring equipment.

Compliance Assessment

Despite recent improvements, the EPI system in Albania has several gaps in its legal framework, administration and technical capability. There are also professional and institutional problems. The inspectorate system lacks:

- a complete legal framework (there are no laws on inspectorates, air and water protection, waste management, discharge standards, etc);
- regulations and guidelines for environmental inspections, including task outlines for inspectors and how inspectorates should be managed and organised;
- an efficient permitting system;
- an appropriate permit format;
- permits with clear conditions and targets;
- emission standards that would ease the permit and inspection processes;
- more industry honesty regarding self-monitoring;
- checklists for preparing applications for environmental permits;
- a registry or repository of industry information;
- a database for recording permits and compliance inspections;
- legislation pertaining to EIA procedures;
- guidelines and regulations about information that should be provided in an environmental permit application;
- sufficient knowledge about cleaner production, cleaner technologies and end-of-pipe technologies;
- an adequate level of cooperation with the State Police;
- adequate cooperation with public health laboratories (for measuring and reporting emissions-related data);

- regular inspection of facilities;
- guidelines for inspector reporting;
- adequate professionalism among inspectors;
- equipment for measuring emissions; and
- proper equipment for REA inspectors (desks, cars, computers, etc).

On the basis of this assessment, the MoE needs to make significant improvements to the permitting system, including the content and composition of permits. It must improve the EPI's professionalism, from management on down.

The MoE has drafted a plan to improve the permitting system, which calls for:

- drafting a new law on environmental protection;
- renewing permits each year with bilateral contracts that specify well-defined conditions specific to each industry;
- promoting preventive measures at the source of pollution;
- requiring industry to abide by self-monitoring standards;
- establishing a database for issued permits, categorised by sector, technology and year of production;
- establishing a database for inspections or site visits, including findings;
- preparing a law on EPIs, focusing on their tasks and responsibility;
- preparing guidelines for site visits, inspection reports and follow-up procedures;
- training of inspectors;
- providing information to businesses;
- equipping inspectors with basic office tools (chairs, computers, etc);
- equipping inspectors with measuring equipment; and
- strengthening the EIA system.

In addition to these, the law should set minimum requirements for information to be included in environmental permit applications. The permits should be based on an integral outlook, thus all aspects of the environment should be viewed as interrelated, and must be considered as a whole.

The MoE has already taken steps to implement this plan and is committed to strengthening the EPI and environmental permitting system. Laws have been prepared on:

- environmental impact assessments;
- air protection;
- gaseous emissions standards;
- protection of marine environments from pollution and damage;
- protected areas;
- biodiversity;
- environmental information;
- water protection; and
- soil protection from pollution and erosion.

Additional steps that have been taken include:

- the drafting of wastewater standards;
- the introduction of eco-taxes (trial taxes have been assessed on fuel, packaging and waste);
- the elaboration of major steps toward improving the permitting system and inspectorate body performance;
- environmental audits of two publicly-owned factories, an oil refinery and a ferro-chromium factory;
- an update of the National Environmental Action Plan;
- a cooperative project with the DFID related to strengthening of the MoE and its inspectorate body;
- a cooperative project with the Italian government to strengthen the risk-assessment capacity and management of the MoE and inspectorate body; and
- a cooperative project under REReP for the strengthening of the Environmental Action Plan.

Results

The lack of indicators to measure results of compliance checks and inspections is obvious. One such indicator, however, is the number of fines per year — about 10 in 2001. The maximum fine for an environmental infraction is 1 million leks, or about USD 7,000. The collection of fines is negligible due to the weakness of the state in general, and the EPI in particular.

There is greatest need for a list of indicators to measure the EPI performance.

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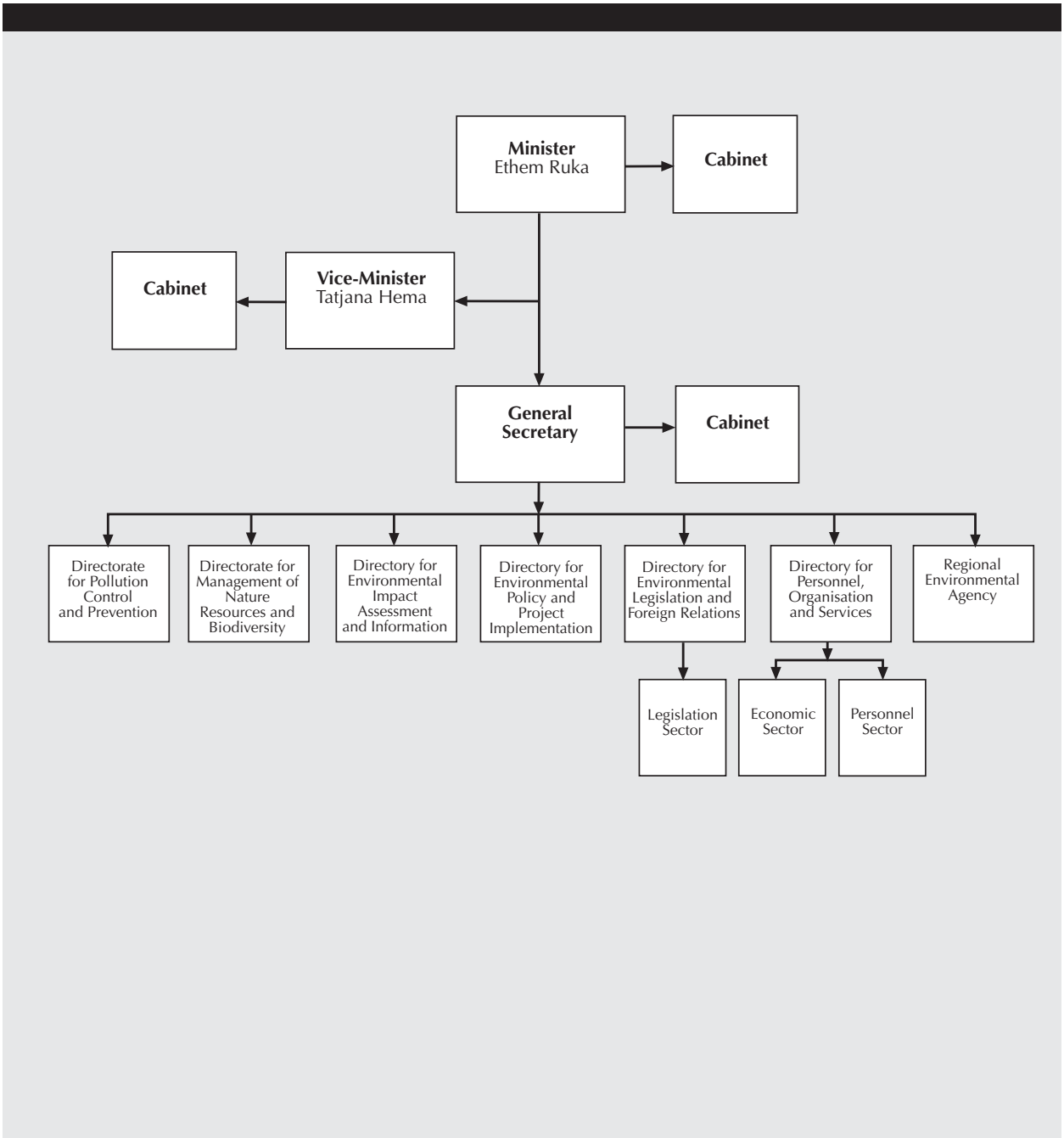
Annex: **Structure of the Ministry of Environment**



Country Profile:
Bosnia and Herzegovina

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Country Profile: **Bosnia and Herzegovina**

Introduction

According to the Dayton Accords signed in Paris on December 14, 1995, Bosnia and Herzegovina (BiH) is administratively divided into two entities:

- the Federation of Bosnia and Herzegovina (Federation of BiH), and
- the Republika Srpska (RS).

The Constitution of Bosnia and Herzegovina establishes a federal state. It divides rights and powers between the institutions of Bosnia and Herzegovina and those of the entities.

Bosnia and Herzegovina, like numerous other countries engaged in the process of creating a modern environmental framework, requires extensive assistance in building its legal framework, institutions and policies. The primary objective is to provide BiH with an environmental framework compatible with European Union standards. The European Commission has engaged in drafting environmental legislation for both entities.

State Administration

Structure of Bosnia and Herzegovina

Although the Constitution of Bosnia and Herzegovnina has no provisions that are explicitly environmental, it nevertheless indicates a role of the state vis-a-vis the two entities, the Federation of BiH and the Republika of Srpska, in environmental protection. Thus environmental authorities operate under a dual system without integrated support. Consensus is building that the entities and the state should be vertically integrated in environmental protection. At present, the protection of nature is not viewed as one of the most urgent issues at the state level.

Administrative Structure of the State

Annex 1, a diagram of Bosnia and Herzegovina, shows that at the state level BiH has neither a ministry of environment (MoE) or an environmental protection agency (EPA). It does have an inter-entity body called the Environmental Steering Committee (ESC).

Administrative Structure of the Entities

According to the Constitution, environmental issues are the province of BiH's two separate entities, the Federation of BiH, and the RS. Responsibility in the former goes to the Federal Ministry of Physical Planning and Environment of Bosnia and Herzegovina (MoPPE) and, in the latter, to the Urbanism, Housing and Communal Services, Civil Engineering and Ecology of the Republika Srpska (MoUH-CSCE).

Both ministries are responsible for setting strategy and policy for their respective entity. Additionally, they are in charge of agreements and permits, the setting of standards and regulations, and the enforcement of laws and regulations through licensing and inspections.

(Annexes 2 and 3 show the government structures of the Federation of Bosnia and Herzegovina and the Republika Srpska. The ministries overseeing environmental matters are shaded.) According to the Constitution of BiH, environmental responsibilities are shared by the federal and cantonal ministries of environment (MoE). In the Republika Srpska environmental responsibility is centralised or "vertically" organised.

The Federation of Bosnia and Herzegovina

The organisational structure is determined by the Constitution of the Federation of BiH in which 10 regional cantons are established. Chapter 3 of the Constitution divides environmental competencies between the federal and cantonal authorities. Article 2 (e) of this chapter prescribes that federal and cantonal authorities are jointly responsible for the "policy of environmental protection" and Article 2(i) states that they both oversee the "use of natural resources." However, Article 3 states " as appropriate, the responsibilities in Article 2 may be exercised jointly or separately, or by the Canton as coordinated by the Federal Government."

Section IV, C, 3, Article 10 (1) (b) of the Constitution of Federation of BiH states that the Constitutional Court shall resolve disputes between any canton and the federal government.

Structure of the Cantons

Each of the cantons has its own constitution and government. The structure of the cantonal governments, outlined in Annex 6, is similar to that of the federal government. Regarding the environment, all of the cantonal constitutions concur that environmental policy is a shared responsibility with the federal government, in accordance with the Federal Constitution. The cantons may delegate responsibility for the environment to municipalities and the federal government. Article 4 (f) of Section 3 gives the cantons exclusive responsibility for "regulating local land use, including zoning."

The Republika Srpska

The RS is a centralised entity of BiH without cantons. Local administration exists only at the municipal level. The RS is responsible for ensuring environmental protection with the municipalities in accordance with the law. It is also supposed to take care of the specific needs of citizens in environmental protection according to Article 102.5 of the Constitution. The administration structure of the RS is given in Annex 3.

Current Environmental Legislation and Policy in Bosnia and Herzegovina

Annex 2 of the Dayton Accords, which addresses transitional arrangements, states that all laws from the former Socialist Republic of Bosnia and Herzegovina that are not inconsistent with the Dayton Constitution may remain in force. This is significant in terms of the environment because it affirms the standing of the Law on Physical Planning in the Federation of BiH, passed in September 1987 ("*Official Gazette SR BIH*, No. 9/1987).

Environmental Provisions of the Federal Law on Physical Planning

The Federal Law on Physical Planning incorporates the field of environment as follows:

- Chapter III on Protection and Development of the Human Environment (Articles 30-75);
- General (Articles 30-40);
- Protection of Significant Natural, Cultural and Historical Heritage Areas (Articles 41-48);
- Protection of Soil and Jeopardised Areas (Articles 49-54);
- Protection of Water (Article 55);
- Protection of Air (Articles 56-64);
- Protection of Urban Conditions (Articles 65-73); and
- Natural Disaster and War Activities Recovery (Articles 74-75).

This law states that "the values of the human environment created by natural forces and acts of man, as well as satisfactory conditions for life, shelter, work and relaxation in the natural and developed environment are under the protection of society."

Article 32 states that "any activity that might cause the conditions of the human environment to become less than satisfactory should be performed in such a way that the hazard created by those involved is avoided or reduced to the greatest extent possible. Furthermore, anyone intending to engage in an activity that might endanger the human environment is obliged to acquire a permit, accept restrictions on the activity and to take all precautions to prevent or control the hazard to the human environment."

Environmental Provisions Included in the Constitution of the Republika Srpska

Article 35 of the Constitution of the Republika Srpska declares: "A person has the right to a healthy environment. Every person shall be bound in accordance with the law and his/her own capabilities to protect and improve the environment."

Environmental Provisions Included in the Law on Physical Planning in the Republic Srpska

Article 30 of RS's Law on Physical Planning (Official *Gazette of the RS*, No. 19/1996) states: "For the purpose of efficient protection and improvement of the environment, economic and all other activities that endanger the environment shall be subject to a special regulatory regime and be registered in a separate register." The Urbanism, Housing and Communal Services, Civil Engineering and Ecology intends to publish a more a detailed list of activities, and of how they might be regulated and registered.

New Environmental Legislation in Bosnia and Herzegovina

A set of proposed laws on environment-related issues has recently been drafted by foreign and local experts. The list includes draft legislation on:

- water protection;
- waste management;
- nature protection; and
- air protection.

The list also includes a framework law on environmental protection, incorporating environmental permitting and an integrated framework for environmental licensing. This law makes reference to supporting procedures, such as environmental impact assessments

(EIAs), based on the concept of integrated pollution prevention and control of the governments of both Federation of Bosnia and Herzegovina and the Republika Srpska.

This new environmental legislation is in the final phase of adoption. It is expected that Parliament will adopt it in summer 2002.

In its 128 articles and 16 chapters, the proposed Framework Law on Environmental Protection (Annex 5) covers the following issues:

- **Principles of Environmental Protection, Chapter III (Articles 5-11):** Public Participation and Access to Information (Article 10);
- **Environmental Information and Education, Chapter V:** Environmental Information System and Provision of Information (Articles 22 and 23), Entry of Environmental Data into Other Records (Article 24), Registering of Installations and Pollution (Article 28), Active Dissemination of Environmental Information (Article 29), Access to Environmental Information (Articles 33-34), Public Participation in Decisions (Article 36), Access to Justice (Article 38–39), Competencies (Articles 40, 42 and 43), Environmental Impact Assessment (EIA) (Articles 53-65);
- **Environmental Permitting and Major Accident Prevention, Chapter X, (Articles 66-85):** Major Accidents Prevention and Control (Article 75), Information on Accidents (Article 76), Major Accident Prevention Plan (Article 77), Safety Reports (Article 78), Information on Safety Measurements (Article 80);
- **Setting of Environmental Quality Standards, Inspections and Supervision, Chapter XI (Articles 86-92):** Environmental Quality Standards (Articles 87-88), Inspection (Articles 90-92), Environmental Management System (Articles 97);
- **Financing Environmental Protection, Chapter XIII, (Articles 101-112):** Environmental Funds (Articles 102), Financial instruments (Articles 104);
- **Civil Liability for Environmental Damage, Chapter XIV, (Articles 113-121)**
- **Inter-Entity Cooperation, Chapter XV, (Articles 122-125);** and
- **Penalties, Chapter XVI, (Articles 126-128).**

The set of environmental laws will be valid for both entities of Bosnia and Herzegovina.

Identified needs are as follows:

- to accelerate the process of adoption of new environmental legislation as the legal basis for capacity building and institutional strengthening of environmental institutions in both entities of Bosnia and Herzegovina,
- to draw up secondary environmental legislation under provisions of new environmental laws, and
- to establish and develop stable financial resources in the form of environmental funding.

Institutions Connected to the EPA

Bosnia and Herzegovina has no federal environmental protection agency (EPA) or any other specialised institution dealing with the environment. Some international donors have expressed interest in supporting the establishment of such a body, but no concrete activities have been carried out in this respect.

Environmental Institutions at the State Level

Bosnia and Herzegovina's Constitution does not define environmental activities at the state level.

The six the ministries, shown in Annex 1, are:

- Foreign Affairs;
- Foreign Trade and Economic Relations;
- European Integration;
- Human Rights;
- Civil Affairs and Communication; and
- Treasury.

In addition, there are the Institute for Standardisation, Metrology and Intellectual Property, the Agency for Statistics, and the Archive of Bosnia and Herzegovina.

At present, it is unclear which institution should assume responsibility for environmental issues at the state level. At present, environmental responsibilities seem to be divided among the Ministry of Foreign Affairs, the Ministry of Foreign Trade and Economic Relations, the Ministry for European Integration and the Ministry Civil Affairs and Communications. The Ministry for European Integration also takes some responsibility as it coordinates activities linked to EU accession.

This situation is a result of the Dayton Peace Agreement, in which environmental responsibilities were divided between the separate entities of Federation of Bosnia and Herzegovina and the Republika Srpska, and, in the case of the former, were split further between federal and cantonal authorities.

Environmental Institutions in the Federation of Bosnia and Herzegovina

In the Federation of BiH, the relevant ministry is the MoPPE (Annex 4). Other environmental responsibilities are meted out as follows:

- The Ministry of Agriculture, Water Management and Forestry looks after water-resource management, including water licenses, approvals and inspection.
- The Ministry of Health is responsible for providing clean drinking water (and for the protection of the populace from radiation).
- The Ministry of Energy, Mining and Industry is responsible for recycling solid waste.
- The Ministry of Traffic and Communication is responsible for traffic and communication issues.

In all 10 cantons, the authorised bodies are:

- the ministries of Civil Building, Spatial Planning and Environment oversee zoning plans and environmental protection within cantonal borders; and
- the Ministry of Agriculture, Water Management and Forestry oversee administrative issues linked to water-use licensing, in accordance with the Law on Waters under the cantonal authorities.

Environmental Institutions in the Republika Srpska

The governmental structure of the Republika Srpska is diagrammed in Annex 3. In the RS, the Urbanism, Housing-Communal Services, Civil Engineering and Ecology is directly responsible for environmental issues. The Ministry of Agriculture, Water Management and Forestry and similar ministries, similarly to Federation of BiH, are responsible for such aspects of the environment as air, water and soil protection, and permitting.

Inter-Entity Bodies

The Environmental Steering Committee and the Commission for Water were established in 1998.

Environmental Steering Committee

The Environmental Steering Committee (ESC) was established as an inter-entity body to specifically deal with environmental issues (Annex 1).

The committee was established according to a memorandum of understanding between the Federation of BiH and the RS. The ESC consists of eight members and deals with issues related to the environment delegated to it by the twin entities. Its purview includes:

- international agreements/treaties concerning environmental matters;
- international environmental programmes;
- cooperation with the European Environmental Agency (EEA);
- harmonisation of existing and future environmental legislation and regulation;
- harmonisation and monitoring of environmental standards;
- harmonisation of environmental action plans with physical planning concerning the environment by RS and BiH;
- harmonisation of environmental databases and information systems;
- information collection and exchange (inter-entity and international);
- harmonisation of plans for emergency situations;
- coordination of all environmental activities linked to BiH's wish to enter the European Union.

The ESC is supposed to propose guidelines and expertise to the relevant ministries of both entities who. in turn, apply these guidelines in their work.

Commission for Water

The Commission for Water (CW) is responsible for the cooperation between the relevant ministries of both entities in all water management issues. Its goal is to prevent potential disputes in water management. The commission has eight members, four from the RS and four from BiH. The memorandum of understanding signed on June 4, 1998 established the CW and put it in control of:

- international waterways;
- international water-management projects;
- cooperation with Croatia and Serbia and Montenegro;
- harmonisation of regulations in water management;
- harmonisation of water-quality issues and monitoring water quality;
- water resources protection through control of solid-waste disposal;
- oversight of laboratories that monitor water quality;
- construction and reconstruction of water-management facilities important to both entities;
- water facilities that straddle the border between RS and BiH;
- collection and exchange of information (inter-entity and international); and
- harmonisation of emergency response plans.

Future Competent Inter-Entity Body for Environmental Issues

Under the provisions of the draft FLEP, the current ESC will eventually be replaced by an inter-entity body in charge of environmental matters, and imbued with greater authority.

According to Article 122 of the Law, this embryonic body should develop the envisioned Environmental Protection Agency of Bosnia and Herzegovina (EPA). According to plan, this body would have equal standing with the Agency for Statistics and the Institute for Standardisation, Metrology and Intellectual Property. Its main tasks would be:

- collection and monitoring of environmental data from the entities;
- representation of the state in international environmental issues (in conventions and global protocols, for example);
- advising ministries on setting standards, laws and regulations; and
- harmonisation of environmental issues between RS and BiH.

For these tasks, the establishment of the EPA might be a long-term option. An institutional EPA could be the environmental focal point for relations with international organisations. The EPA could work in close cooperation with licensing offices (environmental agencies) at the entity level.

Environmental tasks would be ascribed directly to the EPA by the Council of Ministers. A decision about how to pay institutions that may carry out the tasks would be necessary. Funding could be provided by the relevant state ministry on a contractual basis upon completion of specific tasks.

In the short-term, the responsible inter-entity body could be a collection of working groups under the current Environmental Steering Committee (ESC). These working groups do not currently exist within the ESC, and would have to be established.

Thus, the technical work could be done separately from politics under the supervision of the ESC. To begin with the permanent staff would comprise of no more than a secretariat. However, it would have to evolve into an institution before it could represent the country internationally.

A weakness of this plan is that the ESC is not an organisation, but merely a committee with no working groups dealing with technical issues. No significant progress can be seen from the minutes of the meetings that have been held on the issue. Funding is not provided; therefore the establishment of a separate EPA — in addition to the existing ESC, which should cooperate with the EPA — is considered the better option.

Identified needs are as follows:

- creating the legal base for establishing an environmental protection agency (EPA) at the state level;
- establishing a fund for the agency;
- a proposal of future internal organisation of the agency;
- institutional strengthening and a capacity-building agency;
- education and training of administrative personnel;
- exchange of positive experiences from other countries within the EPA framework.

Permitting System and its Connection to the Future EPA

Permitting System in the Federation of Bosnia and Herzegovina

The Federal MoPPE plays the main role in environmental policy, including the licensing of large and medium-sized industrial plants and their inspection. According to the law, the Ministry of Physical Planning is in charge of the licensing of large installations, including the procedure of ensuring successful urban planning. The same ministry processes all applications throughout the federation. The ministry is the central institution for data and information on licensing, but it needs the help of specialised institutes based in Sarajevo concerning licensing requirements.

Additionally, there is a situation of conflict concerning licensing legislation with the cantons. Apart from the lack of staff, the MoPPE is too far away from the installations it oversees for inspection and monitoring purposes.

A stronger Federal MoPPE could result in the establishment of uniform, federation-wide regulations, ensuring a consistent standard of environmental licensing in BiH. It would also help standardise inspection procedures and help the ministry attain the necessary legal competence for its work.

The MoPPE sees its role as being the central environmental licensing body. However, the cantons with large industrial installations have their own environmental laws. The cantonal ministries see themselves as the central environmental licensing bodies. As a result, applicants for large-installation licensing do not know where to apply.

The European Commission's experts have recommended the establishment of a new federal ministry of environment that would ensure the integrated management of main aspects of the environment; namely air, water, nature, waste management and biodiversity.

At present, excessive license requirements deter investors from opening new factories. The current system also lacks an environmental licensing procedure for the extension or retrofitting of installations. When such a procedure is implemented, it would be greatly simplified under a unified ministry for environment.

The new ministry of environment would also ensure that the inextricably linked sectors of the environment receive closer government attention. Such a ministry

would strengthen the position of the federal government versus the cantons, and eliminate redundant or conflicting activities and rules of the institutions involved.

Under the current licensing procedure, according to the information available, the MoPPE must procure opinions from the Ministry of Agriculture, Water Management and Forestry and from the Ministry of Energy, Mining and Industry. The license is issued in three steps:

- urban concordance permit (license for the location of the installation);
- building permit; and
- resource-use permit (license for operation).

During the licensing process, a commission must be nominated and paid for by the applicant. This commission checks the data provided by the applicant and the quality of the equipment. The MoPPE issues the license and, where appropriate, specifies additional conditions, for example, the carrying out of an environmental impact assessment.

Permitting System in the Republika Srpska

The Urbanism, Housing-Communal Services, Civil Engineering and Ecology of the RS oversees the licensing of large industrial installations including the urban concordance permit. However, other public concerns related to water quality, factories and power generators are overseen by the Ministry of Agriculture and Water, the Ministry of Industry and the Ministry of Energy and Mining.

In the process of obtaining urban concordance and building permits for buildings and other public facilities, the investor is obliged to seek expert opinion on the special conditions of construction and the consequences of the development's operation. A recognised institution appointed by the Urbanism, Housing-Communal Services, Civil Engineering and Ecology oversees this exercise.

For large installations this procedure starts in the ministry. According to Article 77 of the Law on Physical Planning, a request for permits for buildings and activities identified in the Article 76, Paragraph 2 of the same law shall be submitted to the ministry via the municipal administration body responsible for urban affairs. The ministry shall reach a decision having consulted the municipality or municipalities involved.

The license covers requirements for the building's location, construction and operation and, where appropriate, specifies additional conditions.

The licensing of smaller installations is carried out by the municipalities. According to Article 77 of the Law on Physical Planning, a request for an urban concordance permit shall be filed at the municipal administrative body responsible for urban affairs. The procedure is the same as that for larger projects. The applicant must obtain an urban concordance permit covering the location, construction and operation of his facility.

The system has weaknesses, including a shortage of staff and funding at the Urbanism, Housing-Communal Services, Civil Engineering and Ecology. Its Department for the Environment currently has a staff of six, and plans to add two more. The Law on Physical Planning was adopted in 1996 and, since then, the ministry has not issued a single license for a large development.

A stronger Department for the Environment or future Ministry for the Environment would have several benefits. It would ensure the integrated management of the main aspects of the environment, namely air, water, natural surroundings, waste management and biodiversity. Through clear assignment of authority regarding the licensing procedure and quality of the environment and through better coordination with the involved ministries concerned (Agriculture/Water, Industry, Energy and Mining) and municipalities, the ministry would secure standardised environmental licensing, installation inspections and the necessary legal competence.

Future Environmental Permitting in Bosnia and Herzegovina

The draft framework Law on Environmental Protection covers environmental permits and provides an integrated framework for environmental licensing. The law also includes a reference to supporting procedures such as environmental impact assessments, based upon the concept of integrated pollution prevention and control.

Articles 68-74 of this draft law cover environmental permits. Article 68 states that the environmental permit shall aim at a high level of environmental protection. Plants and installations listed in the implementing regulation may only be built and operated with an environmental permit issued in accordance with the law. An environmental permit is also required for a substantial conversion of an installation.

If other permits, approvals or preconditions are required under other laws, they should be issued in conjuntion with the environmental permit. The authorities responsible for issuing other permits are to be involved in the environmental licensing procedure.

Once issued, the permit should be updated every five years at the relevant ministry.

According to Article 71 regarding environmental permits, the relevant ministry shall grant an environmental permit within four months of application. If an EIA is required, the environmental permit shall be granted within two months after delivery of the environmental information system.

The environmental permit contains the following:

- emission limit values for pollutants;

- requirements for protection of air, soil, water, flora and fauna;
- measures concerning the management of waste generated by plant or installations;
- measures for minimising long-distance or transboundary pollution;
- self-monitoring system specifying measurement methodology and frequency; and
- contingency plan for operations under abnormal conditions.

Emission limits and other technical aspects of the permit are based on the best available techniques. They also take into account the technical characteristics of the installation concerned, its geographical location and the local conditions.

Where environmental quality standards are unattainable by the use of the best available techniques, additional measures shall be required in the permit (e.g. limits on operation hours, cleaner fuels, etc).

Installations identified in the implementing regulation that have received or will receive an environmental permit before the new law comes into force must get a new environmental permit by 2008. The ministry must set application deadlines for an environmental permit for specific types of installations as defined in Article 72 on existing installations by the implementing regulation.

Based on Article 74 of this draft law, the relevant ministry must reconsider and update the environmental permit or, where such a permit is not required, the urban concordance permit, where:

- the pollution caused by the installation is of such significance that it affects existing conditions and emission limit values;
- substantial changes in the best available techniques make it possible to reduce emissions significantly without incurring excessive costs; or
- the operational safety of the process or activity requires the use of other techniques.

The ministry may also update a permit at the request of a person who claims to be affected by the installation and complains that the pollution caused by it endangers or impairs his or her health or causes an undue nuisance.

Identified needs are as follows:

- drawing up secondary environmental legislative under provisions of a new framework Law on Environmental Protection including a list of relevant installations and industrial plants;
- development and implementation of the system for permits and environmental licences under the new framework Law on Environmental Protection,
- an update of the industrial plant inventory and the establishment of a new registry of polluters, and
- an exchange of positive experiences from other countries in regard to their permit system.

Compliance Control and Compliance Promotion

According to Article 33, the current Law on Physical Planning in the Federation of BiH and the RS, "activities endangering, or that might endanger, the human environment are subject to a special regime of control." Checks are performed on those installations listed in the registry. This list was published under a by-law containing "special agreements on urban concordance permits, construction permits and usage permits for facilities that perform an activity endangering, or that might endanger, the human environment." Another means of control and inspection is the compulsory registration of all installations included on the above-mentioned list.

According to the Article 35, the regular two-year registration of all the listed facilities is performed after the authorities have confirmed that they meet all the required conditions. Expenses of registration are borne by performers of the corresponding activities.

However, Article 35 also allows permits to be issued for "activities that might endanger the human environment" that are of "special interest for the economy" or in the "general public interest."

For small installations, Article 58 states that "the construction of facilities and plants (housing blocks, industrial facilities, workshops, heating plants, public or commercial facilities, hotels, laboratories, etc.) that can pollute the air with gas, smoke, dust, steam or other harmful particles cannot be permitted unless regulated conditions for air protection are secured."

Such small facilities and plants are those "that do not cause significant pollution individually, but due to their concentration or location, they can cause pollution to exceed regulated levels in a certain area."

Permits are granted to such facilities when an inspection certifies that the required conditions have been fulfilled and that the operation of the installation or plant will not endanger the human environment.

Compliance checks are also included in the new framework Law on Environmental Protection. According to Article 92 on measures to secure compliance, if an installation is found to be non-compliant with its permits, relevant laws or regulations and by-laws, the inspector must issue an order of compliance with a set deadline. If the operator does not comply by the deadline, or if the plant poses an immediate danger to human health and the environment, the inspector must order whatever measures necessary, including

shutting the plant down, closing parts of it or some remedial step. The operator bears the costs of such measures. If the operator repeatedly fails to comply, or if his activities pose serious dangers to human health and the environment that cannot be alleviated by other measures, the relevant authority must suspend or withdraw the permit.

Identified needs are as follows:

- establishment of environmental inspectorates in both entities of BiH;
- implementation of environmental inspection in both entities of BiH;
- establishment of comprehensive compliance controls under the provisions of new environmental legislation (measures to secure compliance);
- education and training of personnel with respect to environmental inspection and control; and
- exchange of positive experiences from other countries in the framework of a compliance-control system.

Enforcement Procedures

The new framework Law on Environmental Protection contains provisions on self-monitoring by the operator, inspections by the authorities, ways and means of efficient enforcement and sanctions and penalties.

Article 88 on self-monitoring obligations of the operator states:

1) Installations may only be operated in conformity with the relevant permits and applicable laws and regulations.
2) The operator must monitor the emissions and impacts of his installation. Unless otherwise specified in the permit, or in the relevant regulations, the operator must have his premises checked for conformity with legal requirements by qualified experts every three years. The criteria for qualification shall be set in regulations by the relevant ministry.
3) If an inspection reveals deficiencies, they must be remedied immediately. A report on the inspection, and on any remedial measures to address deficiencies, must be submitted to the relevant authority.
4) The operator must properly maintain his or her installation and ensure that all technical devices work regularly. If incidents or accidents occur that lead to a breach of emission limits, the operator must take immediate remedial action to restore the compliance. If the incident or accident poses a serious threat to human health or the environment, the operator must reduce or suspend operations.

Article 90 on inspections states:

1) In cases of complaints or suspicion of non-compliance with the permit, relevant laws, regulations, or by-laws the authority must inspect the installation for compliance.
2) Installations subject to permit requirements according to provisions of this law or other relevant laws must be inspected regularly by the authority. The authority must draw up an annual or biannual inspection programme to establish a system for inspections and monitoring, setting priorities for types of installations and areas according to the relative urgency of pending environmental problems. The Ministry of Environment prescribes the details of inspection programmes, including time limits for inspections of different types of installations according to how regulations assess their impact on the environment. Installations that fall under "Seveso-Activities" must be checked at least every three years.
3) Inspectors may enter all premises, working areas and buildings for site-inspection and may inspect all documents, data, equipment and materials present and may take samples and measurements. The operator and his staff are obliged to provide assistance for the inspection by providing all necessary information, data and documents.
4) The inspector must prepare a report on the inspection including:
   - the name of the installation and location;
   - the date and duration of the inspection,
   - a description of the inspection performed and all relevant findings, especially technical data and samples;
   - notes of non-complying practices and the explanations given by the operator or staff. The report shall be sent to the operator and the Ministry of Environment. It must be made available to the public on request.

Article 91 on inspections of installations using or storing dangerous substances "Seveso-activities" states the following:

- The relevant authority must establish a systematic of inspection and control system for installations falling under this article's provisions to review the safety-management system and the other requirements of this article.
- The relevant authority must draw up a programme of inspections with at least one on-site inspection every year for installations covered by implementing regulations. If the installation must undergo an environmental impact assessment, inspections by the EIA authorities shall be coordinated with inspections mentioned above.

Article 92 on measures to ensure compliance states the following:

- Upon discovery of non-compliance with permits, relevant laws, regulations or by-laws, the inspector must issue an order of compliance to the operator setting a time limit to restore compliance.
- If the operator does not comply by the deadline, or if the plant poses an immediate danger to human health and the environment, the inspector must order whatever measures necessary, including shutting the plant down, closing parts of it, or some other remedial step. The operator bears the costs of such measures.
- If the operator repeatedly fails to comply, or if his activities pose serious dangers to human health and the environment that cannot be alleviated by other measures, the relevant authority must suspend or withdraw the permit.

Article 126 on penalties states the following: an administrative fine of an amount yet to be determined shall be imposed on any legal and natural entity for the following violations:

- breaches of the requirements of Article 671 concerning the basic obligations of the operator of this law;
- construction or operation of facilities or the undertaking of activities without the required permit or notification, or being in violation of permit stipulations or regulations;
- failure to comply with requirements or conditions set out in the permit or in relevant regulations;
- failure to submit to the relevant authority information, data or documents required by this act or applicable regulations;
- failure to prepare a prevention plan for major accidents and not undertaking precautionary measures; and
- failure to adopt an internal intervention plan and not submitting it to the authority defined in Article 832 of this law.

Identified needs are as follows:

- development of an environmental inspection procedure in both the Republika Srpska and Bosnia and Herzegovina under the provisions of new environmental laws and secondary legislation;
- establishment of enforcement and regulation monitoring;
- education and training of personnel with respect to environmental inspections; and
- exchange of positive experiences from other countries in relation to the enforcement of modern environmental laws (implementation of legal instruments and environmental inspection).

Environmental Inspectorate (EPA): Organisation, Human Resources, Management Training

There are no environmental inspectorates in BiH at the state level. In the Federation of Bosnia and Herzegovina and the Republika Srpska, under the provisions of Laws on Administration and Ministries of the Entity Governments and Laws on Physical Planning, there is a plan to employ environmental inspectors at the future Ministry of Environment (MoE).

Annex 4 shows the organisational structure of the Federal MoPPE along with its inspectorate. The following weaknesses have been identified:

- lack of staff;
- lack of inspectors;
- lack of equipment for site checks; and
- lack of funding for action.

An inspectorate exists as an independent department with four inspectors (one is an environmental inspector) under the direct supervision of the minister. However, qualified personnel are not always available. Institutional strengthening, capacity building of inspection, training of inspectorate management and environmental inspectors are necessary.

The situation is similar in the Urbanism, Housing-Communal Services, Civil Engineering and Ecology of the RS.

In general, there is no linked network of environmental inspection between the state, entity, canton and municipality authorities.

Identified needs are as follows:

- establishment of an environmental inspectorate in both entities of BiH;
- implementation of environmental inspection in both entities of BiH; and
- development of an inspection network (entity, canton and municipality level).

The most urgent identified needs are as follows:

- Financial means for establishing an Environmental Inspectorate and a proposal for future internal organisation of the Environmental Inspectorate,
- Employment and financing of four environmental inspectors, including two in each entity, as an embryonic environmental inspectorate (this must also include education for new inspectors); and
- Capacity building and continuous training of inspectors; and the equipment necessary for enforcement tasks of the environmental inspectorate.

Environmental Inspection in Practice

As mentioned above, environmental inspection at the entity level is not yet established, but is only in the planning stage. Current environmental inspection involves no more than ad hoc activities by the Commission for Inspection under the supervision of the Minister.

In practice, environmental inspections are carried out in only some of the cantons and municipalities in the Federation of BiH and RS. The staff of the Environmental Inspection in the Cantons of Federation of BiH comprises:

- Una-Sana Canton: one environmental inspector;
- Zenica-Doboj Canton: one environmental inspector (this office is currently being reorganised as the Cantonal Inspectorate with an environmental inspectorate as an independent unit of Government of the Zenica-Doboj Canton);
- Herzegovina-Neretva Canton: no environmental inspector;
- West-Herzegovina Canton: one environmental inspector;
- Tuzla Canton, within the framework of Administration Control Service: two environmental inspectors;
- Herceg-Bosnian Canton: no environmental inspector;
- Posavina Canton: no environmental inspector;
- Sarajevo Canton: one environmental inspector with plans to recruit;
- Central-Bosnian Canton: no environmental inspector; and
- Bosnian-Podrinje Canton: no environmental inspector.

Once an installation is running, the operator must ensure that inspections are carried out every two years. The relevant authorities have the right to make inspections at their own discretion. No database of statistics exists. It is necessary to reform the inspection system in BiH at all of levels of responsibility and under provisions of a new set of environmental laws.

Identified needs are as follows:

- establishment of a new environmental inspectorate in both entities of BiH;
- implementation of modern environmental inspection in both entities of BiH; and
- development of an environmental inspection network in BiH linking authorities at the entity, canton and municipality levels.

The most urgent needs are as follows:

- salary for four entity inspectors (EUR 1,000/month for each, with two-year employment contracts;
- equipping of office space: EUR 20,000;
- international consultancy: EUR 20,000;
- training of first inspectors;
- organisation of training for trainers; and
- visit to other inspectorates and exchange of experiences (Slovenia, Croatia, Austria).

Data Storage and Retrieval System

There are no regular databases on the registration of large facilities and plants. There are lists of some of the bigger plants and installations, but the system of inspection and control hardly functions at the entity level. The reasons are mentioned earlier.

In some cantons of Federation of BiH, the periodic inspection (every two years) of bigger plants and industial installations is carried out under provisions of cantonal environmental law. These include the canons of Tuzla, Zenica-Doboj, Sarajevo and West Hercegovina. In the rest of the cantons, there are no environmental laws or environmental inspections. In municipalities, sanitation inspections are carried out as a public service. In RS the situation is similar.

Identified needs are as follows:

- establishment of environmental monitoring and collection, and storage of environmental data, and
- creation of an environmental database.

Monitoring and Sampling, Access to Information

Currently there is no environmental monitoring or enforcement of legal obligations. Since the last war, there has been no official registry of polluters or developed system of environmental monitoring and sampling. Many industrial installations are idle or gutted.

In some cantons of the federation (West-Herzegovina Canton, Tuzla Canton, Zenica-Doboj Canton), environmental monitoring is enshrined in law but not in practice. Some of the cantonal inspectors perform sampling under the provision of cantonal environmental law, but this is performed mostly on an ad hoc basis. Environmental inspectors have an obligation to write reports, which form the basis for periodical and annual reports. There is no developed system of information concerning environmental inspection and monitoring.

Access to environmental information needed to carry out an inspection is impossible because there is no

inspection database. There is no authorised office or service for environmental information.

The future situation, according to the provisions of the new framework Law on Environmental Protection, will be as follows. According to Article 88 concerning obligations of facility operators, facilities may run only if they conform with relevant permits, laws and regulations. The operator must monitor the emissions and impacts of the installation. If not otherwise specified in the permit or in relevant regulations, the operator must have the installation checked for conformity with legal requirements by qualified experts every three years. The criteria for qualification shall be set by regulation of the relevant ministry.

Identified needs are as follows:

- establishment of an environmental sampling network and database;
- development of an environmental information system;
- creation of an environmental database on paper and in electronic form for archival purposes;
- establishment of an inspection reporting system with accessible records of results;
- equipment for on-site environmental checks of water and air (each entity should have its own equipment);
- computers and other office equipment for each entity, canton and region
- equipment for conservation of samples — each canton and large town in the RS should be separately equipped;
- four cameras, one for each entity inspector;
- four mobile phones, one for each entity inspector;
- four Dictaphones, one for each entity inspector;
- four rechargeable torches, one for each entity inspector;
- two video-cameras;
- two alarm dosimeters for ionised radiation (for measuring absorbed and emoted radiation);
- two portable detectors for beta, and gamma-ionised radiation;
- four Motorola walkie-talkies;
- two pairs of binoculars;
- four life jackets;
- four sets of protective clothing;
- two cars — one for two entity inspectors; and
- one patrol boat.

Compliance Assessment

There is no juridical system concerning compliance with environmental regulations. It is necessary to reform and renew the inspection system in BiH at all levels of responsibility and under provisions of the new set of environmental laws.

In addition, it is urgent to prepare secondary environmental legislation as the legal basis for establishing of a modern environmental inspectorate.

Identified needs are as follows:

- exchange of information and experience in the fields of compliance and enforcement.

Enforcement Performances and Actions and Reporting Capabilities

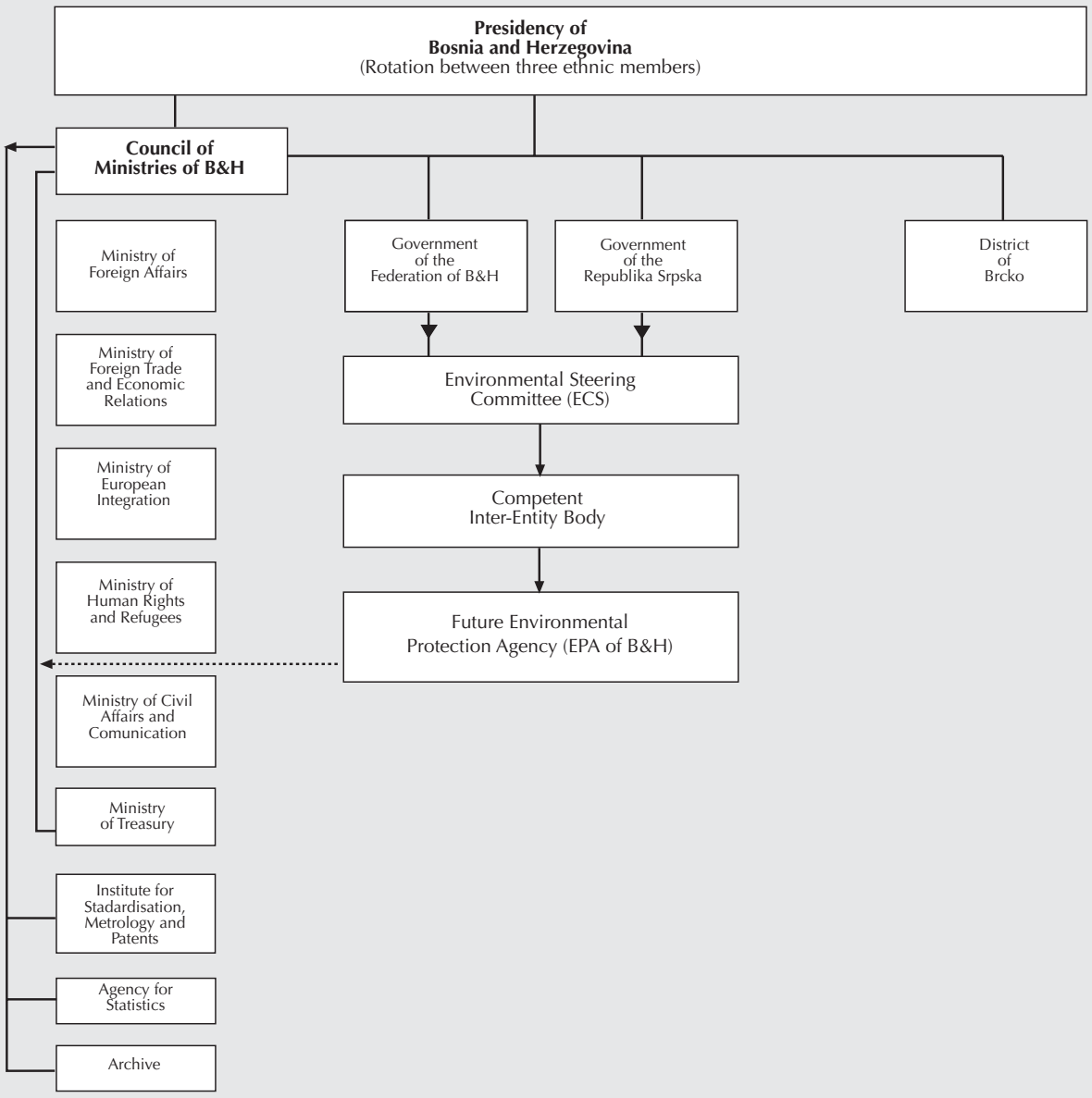
This field is covered under provisions of the proposed new environmental laws and secondary legislation.

Urgent identified needs are as follows:

- funds for preparation of secondary environmental legislation,
- capacity building of environmental institutions in the enforcement of environmental legislation; and
- enhancement of network capabilities of environmental institutions in the enforcement of regulations.

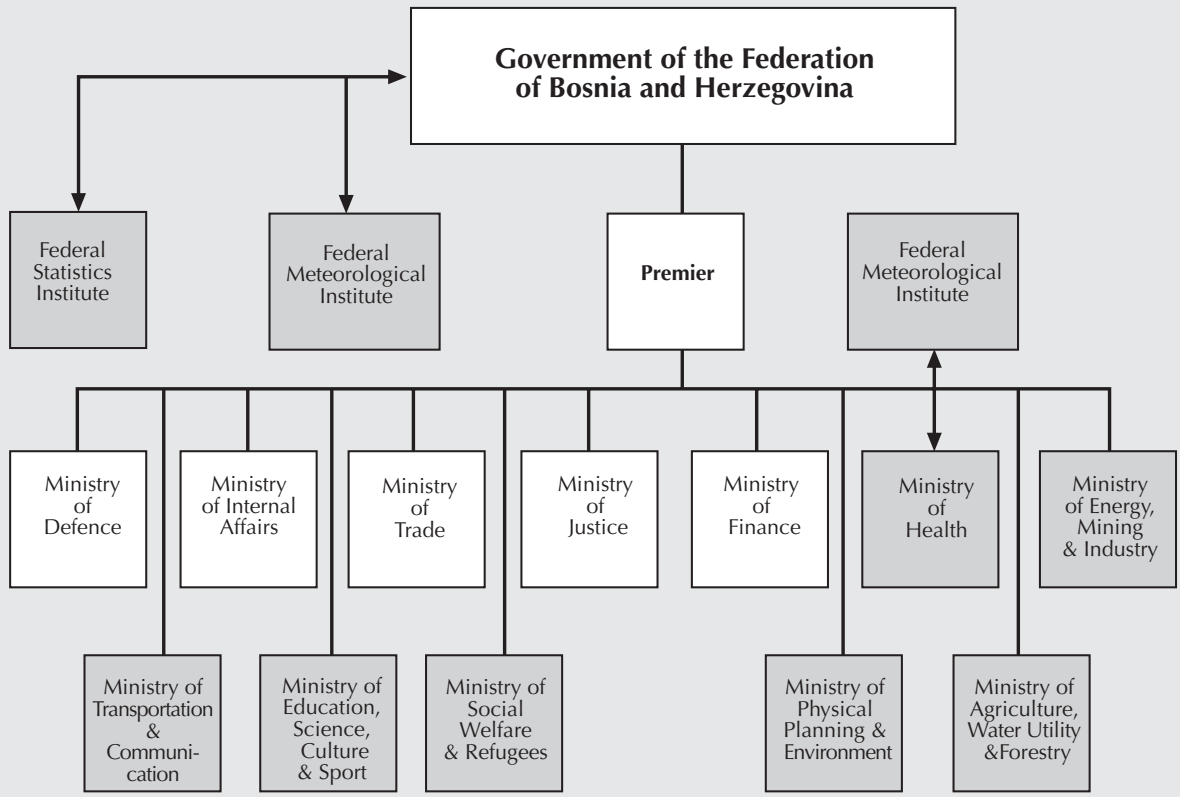
Annex 1: **Administrative Structure of the State of Bosnia and Herzegovina**

FIGURE 1



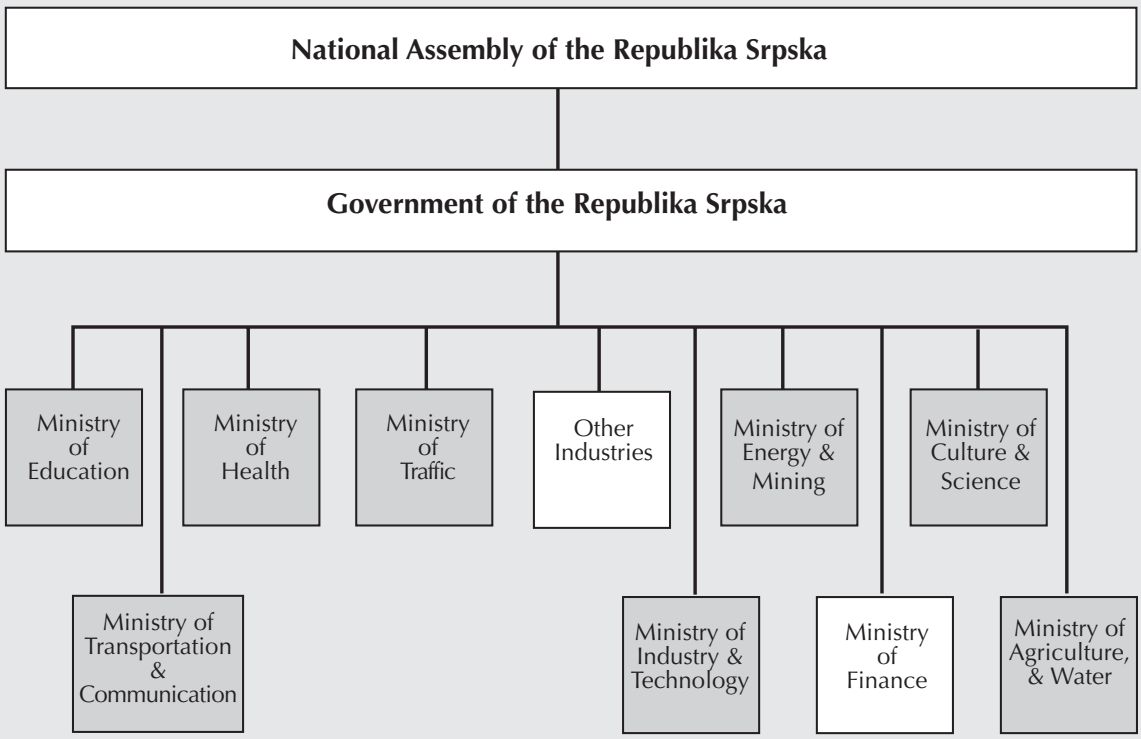
Annex 2: **Government Structure in the Federation of Bosnia and Herzegovina**

FIGURE 2



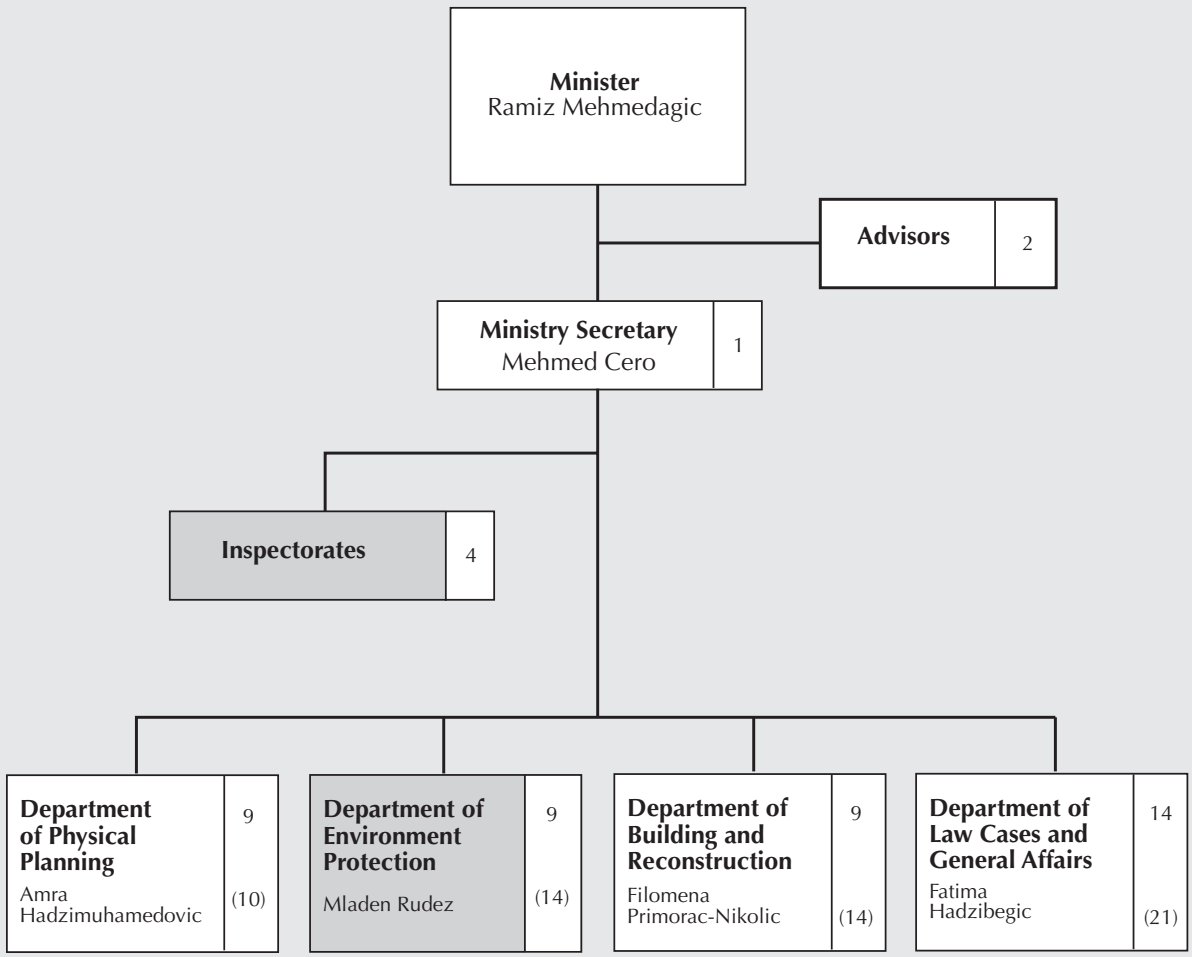
Annex 3: **Government Structure of the Republika Srpska**

FIGURE 3



Annex 4: **Federal Ministry of Physical Planning and Environment of Bosnia and Herzegovina**

FIGURE 4



Numbers indicate amount of staff.
Those in brackets indicate eventual amount of staff.

Annex 5: **Draft Framework Law on Environmental Protection**

Article 67: on the Basic Obligations of the Operator

Installations must be constructed and operated in such a way that:

- the health of persons is not endangered or impaired, and no unbearable/undue nuisance is caused to persons living in the impact area of the installation or to the environment by emissions of substances, noise, odours, vibrations, heat or by traffic from and to the installation;
- all appropriate preventive measures are taken against pollution, and no significant pollution is caused;
- waste production is avoided; where waste is produced, it is minimised, recycled or recovered or, where that is technically and economically not feasible, it is disposed of while avoiding or reducing any impact on the environment;
- energy and natural resources are used efficiently;
- necessary measures are taken to prevent accidents and limit their consequences;
- necessary measures are taken upon cessation of activities to avoid any pollution risk and to return the site of operation to a satisfactory state. A satisfactory state shall mean that all environmental quality standards relevant for the site of the installation, especially those concerning protection of soil and water, are met.

The requirements set out in Paragraph 1 of this Article pertain to the operator for the construction, operation or cessation of installations. These standards must be applied when deciding on an environmental permit.

Regarding installations for which the acquisition of an environmental permit is not required: the competent authority, while issuing urban permits, shall ensure that the requirements established in Paragraph 1 of this Article are met.

Article 83: on Internal and External Emergency Plans

The operator must draw up an internal emergency plan for measures to be taken in the event of a major accident, and must submit it to the authority in charge of emergency management to enable the latter to draw up an external emergency plan for measures to be taken outside the installation.

The emergency plans must be established in order to:

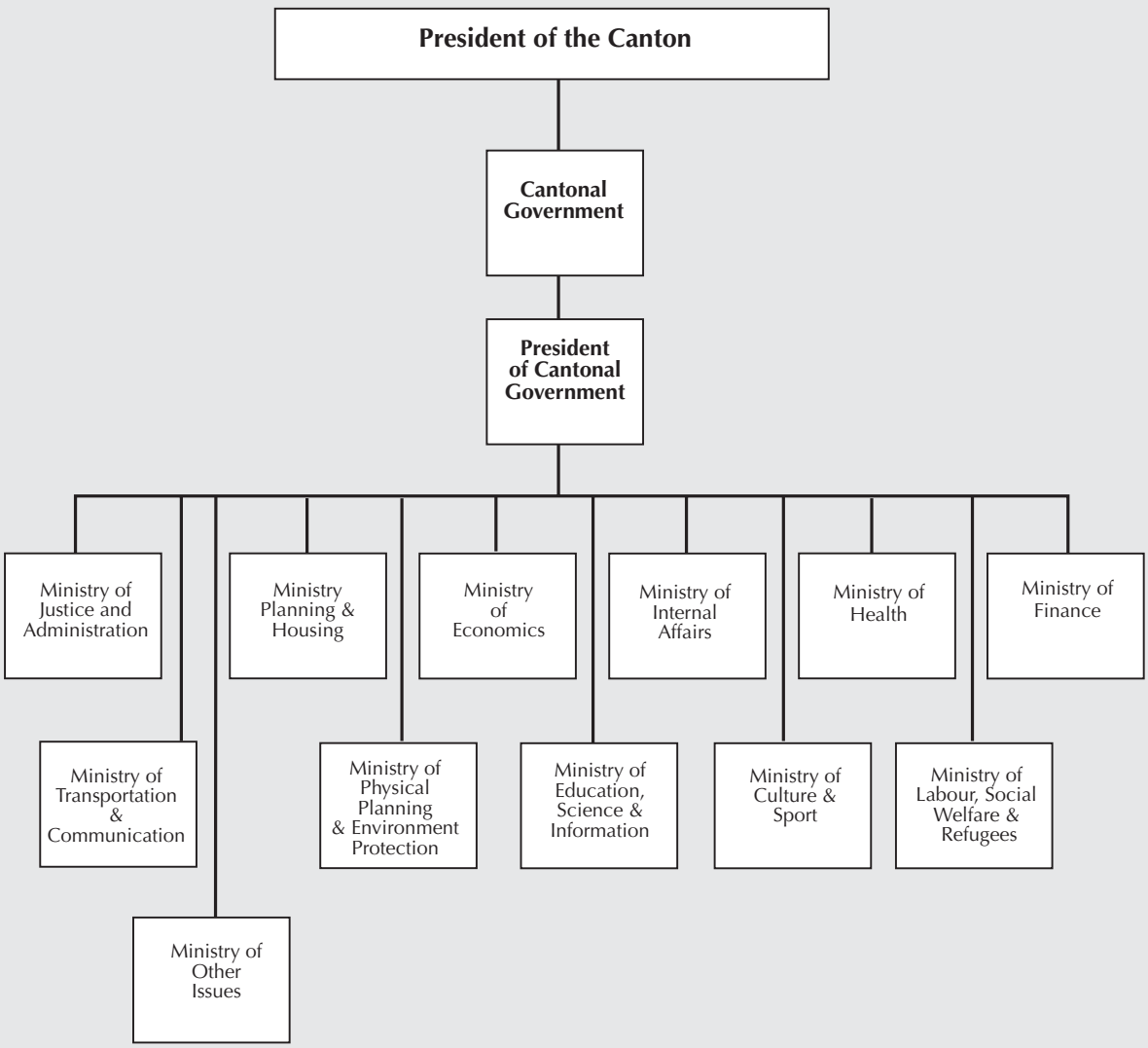
- to control incidents so as to minimise the effects and to limit damage to people, the environment and property;
- to implement the measures necessary to protect man and the environment from the effects of major accidents;
- to communicate necessary information to the public and the services and authorities concerned in the area; and
- to provide for the restoration and clean-up of the environment following a major accident.

The internal and external emergency plans have to be put into effect without delay in the event of a major accident or any other uncontrolled event, which could lead to a major accident.

They must be reviewed, tested and, where necessary, revised and updated by the operator or the competent ministry at suitable intervals of no longer than three years; taking into account changes occurring in the installation, emergency services or new technical knowledge.

Annex 6: **Federation of Bosnia and Herzegovina — Canton Government Structure**

FIGURE 6



Country Profile: **Bulgaria**

Prepared by
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February 2002

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Country Profile: **Bulgaria**

General Information

The territory of Bulgaria covers about 111,000 square kilometres. By presidential decree, the country has been administratively divided since January 4, 1999 into 28 regions and 262 municipalities. The population totals about 8 million, of which 68% live in municipalities. Nine cities have a population of more than 100,000. The capital city of the country is Sofia with a population of 1,122,302. The average density of the population in the country is 74.2 persons per square kilometre. The most urbanised parts of the country are the metropolitan areas Sofia, Plovdiv and Varna.

Air[1]

According to a comprehensive assessment of harmful emissions, 2,436 enterprises release pollution into the air. The following data have to do with the basic pollutants commonly found in ambient air — sulphur dioxide, nitrogen dioxide, dust, carbon monoxide — as well as specific pollutants such as lead, mercury, cadmium, dioxins, furans and polyaromatic hydrocarbons.

Water[2]

The country has a well-developed water supply system, servicing 98% of the population. The number of water-supplied settlements is 4,517, which represents 84.6% of all settlements (100% of towns and 81.32% of villages).

The Bulgarian State Standard on Drinking Water regulates the quality of drinking water according to organoleptic, physical, chemical, microbiological and radiological parameters. About 3% of the population connected to drinking water supply systems uses water containing high level of nitrates. In some regions the level of manganese in the water exceeds permissibl limits, which has a negative effect on the organoleptic qualities of the water, and causes problems for the maintenance of the water supply network.

Annually, communities and commercial users collect 1,152,198,000 cubic metres of wastewater.

Waste[3]

In 1997, waste collection amounted to 48 million tonnes, in 1998 27.54[4] tonnes and in 1999 28.91m tonnes. This was mainly industrial waste.

(The distribution of the waste generated by type during the period is shown in Figure 1 below.)

National framework legislation[5]

The following national framework legislation was enacted during the past few years:

- Horizontal legislation: Environmental Protection Act (*State Gazette* No. 86/1991; as amended in April 2000). A new Draft Environmental Protection Act has been prepared and approved by the Council of Ministers. The new framework law will transpose the

FIGURE: 1

	Waste generated by types			
Year	**Municipal waste in thousands of tonnes**	**Construction waste, in thousands m³**	**Industrial waste, in thousands of tonnes**	**Hazardous waste, in thousands of tonnes**
1997	3,628	805	43,586	1,100
1998	3,197	1,043	22,786	548
1999	3,204	1,343	23,664	706
2000	2,885	746	10,103[4]	758

provisions related to environmental impact assessments (EIAs), integrated pollution and prevention control (IPPC), access to environmental information and the Seveso II Directives, and will ensure the basis for implementation of the eco-labelling and EMAS Regulations.

- Air quality: Clean Air Act (*State Gazette,* No. 45/1996, as amended in March, 2000);
- Waste management: Law on Reduction of the Harmful Impact of Waste upon the Environment (*State Gazette* No. 86 /1987, as amended – *State Gazette,* No. 28/2000);
- Water quality: Law on Water (*State Gazette* No 67/1999, in force since Jan. 28, 2000; as amended in 2000). The law introduces the requirements of the European Union (EU) Framework Directive on Water into Bulgarian legislation. The law also incorporates 14 regulations under the framework.
- Nature protection: Protected Areas Act (*State Gazette* No. 133/1998); Nature Conservation Act (*State Gazette,* No. 47/1967, as amended in 2000);
- Chemicals: Law on Protection from the Harmful Impact of Chemical Substances and Preparations (*State Gazette,* No. 10/2000, in force from Feb. 5, 2002). Six regulations under this law are being prepared;
- Ground resources: Ground Resources Act (*State Gazette* No. 23/1999 as amended in No. 28/2000);
- Nuclear safety: Law on the Use of Atomic Energy for Peaceful Purposes, as last amended (*State Gazette,* No. 71/1998);
- Energy: Law on Energy and Energy Efficiency, as last amended (*State Gazette,* No. 1/ 2000);
- Urban planning: The law on Territorial Planning (*State Gazette,* No. 1/2001); and
- Soil Protection: Law on Protection of Soil from Contamination (*State Gazette,* No. 67/1999).

Other legislative proposals are in the process of being adopted:

- New Environmental Protection Act (currently before Parliament, to be adopted by mid 2002);
- Draft Biodiversity Act (before Parliament, to be adopted by mid 2002); and
- Draft Act on Genetically Modified Organisms (under preparation).

These framework laws introduce guiding requirements of the EU framework directives and create the opportunity to introduce the remaining "daughter" directives through regulations, some of which have already been enacted and are being implemented.

Most of the by-laws under the framework laws are also been developed and adopted, and, according to the National Programme for the Adoption of the Acquis (NPAA), national environmental legislation will be fully harmonised with that of the EU by the end of 2002.

Bulgaria has adopted a preventive approach to environmental protection, and has begun implementing concrete requirements on activities, manufacturing processes and products. EU requirements have been adopted in the following areas:

- Air quality: air quality standards, emissions from stationary sources;
- Waste management: requirements for facilities and methods for waste processing and decontamination; requirements for transportation, waste export and import;
- Nature protection: requirements for commercial trade of endangered species, establishment of a national network of protected territories and management of their activities; prohibition of killing, hunting, harvesting, damaging and trading of species under threat of extinction;
- Noise management: Introduction of stricter requirements with respect to subsonic aircraft noise.

Future legislation concerning noise will be based on the Framework Directive 2000/14/EC on noise emissions control. As this is a "new approach" directive, the by-law, which will transpose EU requirements into the Bulgarian legislation, will be issued under the Law on Technical Requirements for Products. Thirteen standards under the Directive will be introduced as national ones. With the adoption of a regulation under the Law on Technical Requirements for Products and the introduction of relevant standards, Bulgaria will achieve full harmonisation with EU legislation concerning noise. The main noise regulation enacted in 1999 was Regulation No. 4 on noise protection in communities (*State Gazette,* No. 41/1999). Noise and gas emissions from aircraft fall under Regulation No. 16 (*State Gazette,* No. 8/1999).

Administration

Environmental protection is administered, in descending levels of authority, by the Ministry of Environment and Water, (see Annex 1), the Executive Environment Agency (see Annex 2) and 15 regional bodies and municipalities. The decisions and national stance on environmental protection are taken directly by the government, while the central state institution

setting environmental policy is the Ministry of Environment and Water[6] (MoEW).
The MoEW is responsible for:

- development and implementation of the national policy on the environment;
- elaboration and implementation of national strategies, plans and programmes regarding environmental protection and rational use of water and natural resources;
- harmonising legislation with the EU and creating horizontal legislation, including preparation of laws and regulations on water management, ambient air quality and waste management, nature protection, chemicals, noise, accidental discharges into the environment and risk management of industrial incidents;
- management of protected areas solely owned by the state and distribution of water resources;
- making decisions on EIA and organising public discussions;
- issuing permits for the use of natural and mineral resources;
- setting tariffs and taxes for EIA;
- establishing sanctions for pollution or damage to the environment;
- management of the national environmental cadastre;
- organisation and carrying out of auctions and concessions;
- control over the implementation and enforcement of decisions on environmental protection;
- enforcement of sanctions included in environmental laws;
- carrying out international negotiations concerning the environment and overseeing Bulgaria's obligations in international agreements on environmental protection and the sustainable use of waters and natural resources; and
- managing a national fund for environmental protection.

Fifteen Regional Inspectorates for Environ-ment and Water (RIEW) have been set up under the MoEW, each of which covers its own territorial scope. RIEWs have monitoring, enforcement and public information functions. Each oversees environmental concerns in at least one but in some cases several municipalities. These activities are as follows:

- overseeing the implementation of the environmental legislation at the regional level;
- supporting municipalities in the preparation and the realisation of local policy in the field of environmental protection;
- informing the public about the state of the environment;
- issuing decisions on EIA for sites and activities of regional importance and on permits for waste treatment activities and facilities. RIEWs themselves prepare or participate in the preparation of documents and carry out activities relevant to the State policy concerning environmental protection and sustainable use of nature;
- overseeing compliance with environmental stipulations of the directives and relevant national legislative acts;
- issuing decisions, authorisations and permits and drawing up written positions, action plans and programmes concerning activities that are likely to affect the environment;
- operating with the national system for ecological monitoring on a regional level; and
- collecting and forwarding to the Executive Environment Agency information concerning the state of the environment and waters at a regional level.

The national Executive Environment Agency[7] (BEEA) is an administrative body established under the MoEW by Decree 214/29 November 1999 of the Council of Ministers on the adoption of the Organisational Statute of the MoEW. The BEEA falls under the provision of the Regulations on the structure and activities of the National Centre for Environment and Sustainable Development (State Gazette 52/1994), the former name of the BEEA. The BEEA was established to carry out and co-ordinate information and monitoring services regarding the monitoring and preservation of the environment in Bulgaria. BEEA is the governing body of the National System for Environmental Monitoring (NSEM) and is a National Reference Centre for the European Environment Agency. The BEEA is responsible for:

- monitoring and laboratory analyses;
- developing methodological guidelines for the RIEWs regarding measurements and analyses;
- collecting and processing information about the state of the environment and issuing related information bulletins; and
- preparing and publishing a yearbook on the state of the environment in Bulgaria.

Institutions Connected to EPAs

Other state bodies with responsibilities for environmental protection are as follows:

- Ministry of Health: monitors impacts on the natural and working environments that affect human health; determines the state policy for preventive healthcare and the quality of drinking water;
- Ministry of Agriculture, Forests and Land Reform: carries out activities related to the protection, restoration and maintenance of soil fertility; protection of water from contamination with nitrates from agricultural production; and use and protection of the forests;
- Ministry of Regional Development and Public Works: implements national policy in the area of territorial planning and public works, develops water supply and sewerage systems, and draws up the National Plan for Regional Development;
- Ministry of Transport: prepares norms for harmful emissions from vehicles and oversees their implementation; and
- Ministry of Energy and Energy Resources: elaborates programmes for development of the energy sector, and particularly for the reduction of environmental pollution by energy-related activities; develops and supports the implementation of policies for effective and rational use of energy and use of alternative energy sources.

Other specialised state bodies supporting the development and implementation of environmental policy are:

- The Committee for Peaceful Use of Atomic Energy: a regulatory body in the area of nuclear safety and radiation protection; and
- The National Agency for Standardisation and Metrology: develops, updates, and carries out the harmonisation of Bulgarian state standards with international and EU standards related to environmental management.

The MoEW works closely with other ministries and institutions according to their responsibilities and priorities. Experts from other ministries draw up written positions on activities likely to affect the environment and take part in working groups concerning these kinds of activities or projects. Within the framework of Working Group 22 "Environment," experts from each of the aforementioned institutions, as well as representatives of the country's main environmental non-governmental organisations (NGOs), take part in the elaboration and adoption of new legislation modelled on EU environmental directives. Representatives of the NGO community also participate in the high environmental councils at the MoEW and the RIEWs.

Local administration

Municipal bodies play an important role in the implementation of environmental policy. In this respect their main functions include:

- developing environmental protection programmes and action plans, primarily concerning air quality, urban waste, and water management;
- developing and implementing overall policy at a local level on the collection, transportation, and safe disposal of municipal waste;
- overseeing the disposal of waste and hazardous substances within their jurisdictions;
- overseeing the construction, maintenance and operation of urban wastewater treatment plants;
- informing the public about the state of the environment; and
- overseeing the observance of environmental laws by small facilities of local importance.

Connection Between the Permitting System and EPAs

The permitting system covers water quality and management, nature protection, waste management, dangerous substances and ground resources management. In order to achieve full compliance with the EU environmental legislation, and in particular with the permitting system under the IPPC Directive (96/61/EC), the Environmental Protection Act will introduce requirements for issuing integrated permits for new and existing facilities and installations.

The following permits are issued by environmental protection institutions in Bulgaria.

Water Quality and Management Sector

Permits for water use

Permits are issued under the Water Act, Article 44, (Secs, 1-3), which stipulates that such a permit shall be required in all cases except when small amounts of water (not more than 10 cubic metres per 24 hours) are used for the user's own needs. The water use includes taking water from bodies of water as well as the utilisation of water energy. Such a permit is not required for transformation of water energy into electric energy through turbines of up to 20 kilowatts that do not impede water flow.

Permits for use of water bodies

These are issued under the Water Act, Article 46, for:

1. new construction, reconstruction, or modernisation of existing systems and facilities for:

- adjusting outflow;
- linear infrastructure crossing water, including aqueducts, bridges, transfer networks and conduits;
- exploration and drawing from underground water;
- protection from the harmful impact of waters;
- discharge of water;
- the extraction of sand, ballast etc.; and
- recreation and water sports.

2. engagement in activities such as commercial fishing, fish breeding, and obtaining and breeding of aquaculture and other biological resources;
3. other uncommon actions that affect the natural state of a body of water, including covering sections of a river and discharging water from a body of water into it.

Permits for the above-mentioned activities shall be issued under the provisions of the Water Act, except in cases when an EIA is required as stipulated by the Environmental Protection Act and the decision on assessment contains all components of a permit required by the Article 56 of the Water Act.

According to the Article 52 of the Water Act, the permits for water use and use of water bodies are issued by:

1. the Council of Ministers when related to the needs of defence and the national security;
2. the MoEW for:
   - water and dam use;
   - use of domestic sea waters, and of the Danube River, except for water transport purposes;
   - transfer of water between water basins by man-made channels;
   - discharge of wastewater containing dangerous substances into the ground;
   - hydro-geological exploration and the construction or reconstruction of water intake facilities for underground waters;
   - filling of newly constructed water bodies; and
   - use of mineral waters under exclusive state ownership for which there is no concession.
3. the MoEW, after gaining consent from the Ministry of Defence and the Ministry of Transport — for use of parts of the Danube River, domestic sea waters, or the territorial sea; and
4. the Director of the Water Basin Directorate for all other cases of water use and use of water bodies under public state ownership, other than those mentioned in item 2.

Nature Protection Sector

Permits for international trade in species of wild flora and fauna are issued under the Nature Protection Act. Article 11 stipulates that import, export or re-export of specimens of plants, animals or clearly identifiable parts and derivatives thereof, which are protected under the Convention of International Trade in Endangered Species of the Wild Fauna and Flora (CITES), shall be undertaken only after a permit is issued by the MoEW.

Waste Management Sector

Permits for collection, storage or disposal of waste are issued under the Act on Limitation of the Harmful Impact of Waste upon the Environment. Article 12 stipulates that the collection, storage or disposal of waste shall require permits issued in accordance with the requirements of the Act.

Permits for import, export or transit of waste through Bulgaria are issued under the Act on Limitation of the Harmful Impact of Waste upon the Environment. Article 51 stipulates that the import, export or transit of waste through Bulgaria shall be allowed only under observance of the safety requirements and with a permit issued by the Ministry of the Environment and Waters. This includes shipments:

1. for imports and transit in all cases unless otherwise provided in international agreements; and
2. for exports – if provided for in international agreements.

According to Article 37 of the Act on Limitation of the Harmful Impact of Waste upon the Environment, permits for activities involving waste collection, transportation, storage, and treatment shall be issued by:

1. the RIEWs for factory waste and hazardous waste;
2. the MoEW, for factory waste and hazardous waste occurring on the territory of more than one RIEW; and
3. the mayor of the municipality where activity is performed for construction waste.

Dangerous Substances Sector

Permits for the import of dangerous substances are issued on the basis of the Decree of the Council of Ministers, No. 12 on the import of dangerous substances, which stipulates that the import of dangerous substances into the territory of the Republic of Bulgaria shall be allowed under observance of the requirements of international agreements and national law and a permit issued by the Ministry of the Environment and Waters.

Industrial Pollution Prevention and Control

Integrated permits for industrial pollution prevention and control: Article 117 of the new Environmental Protection Act (to be adopted by Parliament by mid-2002) stipulates that the construction and operation of new installations and facilities, as well as the operation of existing installations and facilities, shall be allowed only after the issuance of an integrated permit according to provisions of the Chapter on Integrated Permits and of the relevant subsidiary legislation. The authority in charge of permit issuing, review and revision will be the MoEW or the director of the relevant RIEW.

Ground Resources Management

According to Article 4 of the Ground Resources Act, exploration for subsurface resources shall be carried out on the basis of a license granted for prospecting, exploration or both. The extraction of subsurface resources shall be carried out on the basis of a granted concession.

Pursuant to Article 5 of the Ground Resources Act, the rights to subsurface resources exploitation shall be granted through:

- licenses for prospecting and/or exploration issued by the relevant bodies pursuant to the Article 7 upon approval by the Council of Ministers;
- licenses for prospecting or exploration of oil and gas and licenses for prospecting or exploration of subsurface resources on the continental shelf or the exclusive economic zone. These are issued by the Council of Ministers based on a proposal by relevant bodies pursuant to the Article 7;
- concessions for extraction granted by the Council of Ministers based on a proposal by relevant bodies pursuant to the Article 7;
- concessions for extraction pursuant to Article 3, paragraph 2 granted by the respective municipal councils after co-ordination with the MoEW.

According to Article 7, competent authorities include the ministries of Environment and Water; Economy; and Regional Development and Public Works.

Permits granted in 2000 included:

- 800 for waste management;
- 1,239 for water quality and management;
- 69 for ground resources;
- 2,500 for import and export of plants or animals;
- 1,962 for importing dangerous substances; and
- 12 for the import of ozone-depleting substances.

Identified needs of the permitting system are as follows:

- more staff to check for compliance with permit conditions. As spelled out in chapters 6 and 7, approximately 400 inspectors check nearly 17,000 sites a year (including scheduled and complaint-driven checks).
- more capacity and expertise for providing advice. This requires good training in compliance promotion and in law. In Bulgaria, part of the difficulty is that inspectors cannot keep abreast of the steadily increasing body of new legislation.

Environmental Control in Bulgaria

Environmental legislation spells out specialised regulatory, administrative, and investment measures in the separate environmental areas of air, waste, industrial pollution prevention and risk management. Furthermore, there are a number of horizontal measures concerning environmental management issues of crucial importance for the achievement of one of the most important aims of the modern environmental management in Europe — integrated prevention and control of pollution in all area of the environment.

The bodies designated to carry out environmental control activities are the MoEW and its RIEWs. The implementation and enforcement of national environmental legislation is overseen at the regional level by the 15 RIEWs and three national park directorates. Their control activity is co-ordinated by the Directorate for Co-ordination of the RIEWs within the MoEW.

The RIEWs are equipped with 15 laboratories for water quality analysis, 15 laboratories for air quality analysis (both of emissions and ambient air), nine laboratories for soil quality analysis, and seven laboratories for radio-ecological analysis. Through the RIEWs the MoEW oversees 57 urban wastewater treatment plants, approximately 2,800 local wastewater treatment plants and around 900 air purification facilities. The state of ambient air, as well as that of surface, ground and seawater are overseen at the respective designated sites.

The control functions of the RIEWs are provided for in the Statute on the Structure and Activity of the RIEWs and include oversight of:

- environmental components' compliance with requirements of the relevant legislation concerning emissions of pollutants and standards relating to the state of the environment— gauged according to components, regions and type of pollutants;
- activities of enterprises or facilities that may affect or pollute the environment;
- existing sites and activities and sites under construction;

- waste collection; storage, treatment; collection, and disposal of sludge from wastewater treatment plants; as well as waste reuse, recycling, and recovery;
- preservation and development of green eco-systems in human settlements and conservation of animal life and species;
- pollution of surface and ground water due to accidents or accidental discharges;
- compliance with limits established in permits for water use; wastewater discharge; hydro-geological research; and use of thermal water sources, water systems, and facilities;
- compliance with conditions established in EIA decisions.

The needs for compliance checking and promotion are as follows:

- development and implementation of compliance promotion strategies; compliance checking is planned and quite well organized in Bulgaria, despite the lack of sufficient human resources, but compliance promotion is an issue to be considered in the future (eventually in light of the Environmental Management and Audit Schemes and Ecolabeling to be introduced as an option with the new Environmental Protection Act); and
- development and implementation of condoning strategies.

Enforcement Procedures

Enforcement of environmental law in Bulgaria includes preventative measures, operational controls and follow-up control.

Preventive measures: These are carried out through the EIA, environmental permits, environmental statements, etc. The EIA procedure is the basic instrument of preventive environmental control. It is harmonised with EU requirements, including its scope and the need for pro-active public participation in the procedure. The new Environmental Protection Act will fully conform with the requirements of the EU Directive related to the scope of activities subject to assessment, definitions of principles and procedures, and trans-boundary impacts. The adoption of a new Regulation on Environmental Impact Assessment is anticipated within one year after the adoption of the new Environmental Protection Act.

The MoEW oversees EIA procedures. The High Environmental Expert Council is the decision-making body on EIA reports. The Council consists of experts from the MoEW, the Ministry of Regional Development and Public Works, the Ministry of Health, the Ministry of Agriculture and Forestry and the Ministry of Economy. It also includes representatives of municipalities and NGOs.

Operative controls: These are carried out by the RIEWs and include regular checking, surveillance and the taking of measurements related to:

- conservation of air, water and soil quality;
- preservation and sustainable use of natural resources;
- implementation of structural plans;
- waste treatment; and
- biodiversity conservation.

Follow-up controls: These cover enforcement of administrative and economic measures including fines, penalties, cease-and-desist orders or even prosecution for violation of the environmental laws. Bulgaria follows a streamlined policy based on the "polluter pays" principle. The law provides for full coverage of the costs of water supply and wastewater treatment, as well as for urban waste treatment, through taxes paid by the beneficiaries of these services.

In the case of trans-boundary pollution, accidents or hazards, the MoEW and the RIEWs carry out clean-ups and work geared toward avoidance of the spread of the pollution into other areas of the environment. The MoEW is responsible for carrying out these activities together with:

- the State Agency for Civil Protection;
- the Ministry of Internal Affairs (In charge of the Dangerous Substances Division, Customs Police Division and Fire-Precaution Division);
- the National Service for Plant Protection, Quarantine and Agro-Chemistry within the Ministry of Agriculture and Forestry;
- regional health inspectorates within the Ministry of Health;
- regional district authorities and municipalities; and
- NGOs.

Needs of the inspectorates include training in:

- the technical aspects of enforcement practices, including continuous programmes aiming to strengthen the administrative capacity for enforcement in the fields of chemicals, waste management, major accident prevention, integrated pollution prevention and control, and nature protection;
- environmental law; and
- human resources management.

Environmental Inspectorates: Human Resources

The human resources available for 15 RIEWs and three national park directorates have been increased in 2001 compared to 2000. (See Figure 2 below.)

Environmental Inspection in Practice

On average, RIEW experts annually participate in the clean-up of 50 accident sites, inspect approximately 17,000 facilities, draw up about 1,800 citations against polluters and impose approximately 450 sanctions. (See Figure 3.)

There are no official statistics regarding appeals against such citations or court cases related to enforcement of the environmental law.

Some EUR 1,700,000 was collected in 2000 in environmental fines. In general, these funds are reinvested through the National Environmental Protection Fund in environmental protection measures.

Needs for inspectorates are as follows:

- development of performance indicators;
- training in laws, especially the newly enacted ones; and
- training in site visits related to new legislative requirements (for instance, integrated permits compliance checking).

FIGURE: 2

Human resources of 15 RIEWs and three national parks directorates (2000 and 2001)[9]

RIEW No.[10]	Number of staff 2000	Number of staff 2001
1. Blagoevgrad	21.0	23
2. Bourgas	40.5	46.5
3. Haskovo	30.0	31
4. Montana	24.5	25.5
5. Pazardjik	22.5	26.5
6. Pleven	33.0	33
7. Plovdiv	41.0	42
8. Rousse	37.0	38
9. Shoumen	21.0	21
10. Smoljan	19.0	21
11. Sofia	62.0	64
12. Stara Zagora	35.0	36
13. Varna	41.0	44
14. Veliko Turnovo	25.0	25
15. Vratza	24.5	25.5
RIEW TOTAL	**477.0**	**502.00**
National Parks Directorates		
1. Central Balkan	38	61
2. Pirin	27	41
3. Rila	55	73
NPD TOTAL	**120**	**175**
TOTAL	**597**	**677** (Approx. 400 inspectors)

Data Storage And Retrieval Systems

The MoEW oversees collection and dissemination of information concerning the state of the environment and the environmental impacts of various activities. The MoEW maintains registries of: permits issued for waste related activities and water use; EIA reports; sanctions imposed for pollution in accordance with the relevant legal provisions; protected areas; and international projects co-ordinated by the MoEW.

The BEEA is responsible for collection, processing, storage, and publication of environmental information.

The RIEWs assist the MoEW and the BEEA in implementation of environmental legislation on the local level and also have the task of informing the public about the status of the local environment.

The National Statistical Institute (NSI) collects and processes information on expenditures for environmental protection and long-term material assets designated for environmental purposes. NSI is also concerned with information on water supply and use; noise levels in settlements; emissions of harmful substances into the air; the amount of wastewater produced by municipalities and big industrial polluters; and industrial and municipal waste.

The National Meteorology and Hydrology Institute (NMHI) collects, processes and stores data on the weather and climate, as well as on quantitative characteristics of surface and ground water.

The National Catalogue of Data Sources was developed and added to the MoEW's web page in December 2001. The Catalogue is a Meta database, containing information on who holds environmental information in Bulgaria, what kind of information is available and how users may access it. In addition, all the abovementioned institutions maintain specialised databases, registries, and cadastres relevant to their roles and responsibilities.

The Environmental Executive Agency has created a national information system on the different aspects of the environment. It has a hierarchical structure and includes the creation of local databases in the RIEWs and a national database in the BEEA. The system's aim is to create an overall environmental information net-

FIGURE: 3

Operations control carried out by RIEWs in 2000 (Jan. 4 - Dec. 29, 2000)[11]

	Number of sites inspected	Number of reports drawn up against polluters	Number of penalty statements issued	Number of sanctions imposed (up to BGL 2000[12])	Number of fines exceeding BGL 2000 presented for MoEW's approval[13]
1. Blagoevgrad	569	29	24	30	-
2. Bourgas	1,343	69	105	35	4
3. Haskovo	612	68	37	10	5
4. Montana	1,159	147	145	15	-
5. Pazardjik	943	89	88	14	3
6. Pleven	1,187	127	86	12	9
7. Plovdiv	900	110	109	22	6
8. Rousse	951	68	156	25	3
9. Shoumen	1,330	317	355	60	5
10. Smoljan	740	38	28	3	-
11. Sofia	1,865	162	178	9	12
12. Stara Zagora	1,201	163	135	26	1
13. Varna	1,645	260	194	58	7
14. V. Turnovo	1,147	105	104	12	3
15. Vratza	580	100	55	12	5
TOTAL:	**16,161**	**1,835**	**1,755**	**375**	**57**

FIGURE: 4

Operative control carried out by RIEWs in 2001 (Jan. 2, - June 29, 2001)[14]

	Number of sites inspected	Number of reports drawn up against polluters	Number of penalty statements issued	Number of fines (up to BGL 2000)	Number of fines exceeding BGL 2000 presented for MoEW's approval)
1. Blagoevgrad	255	44	32	5	3
2. Bourgas	383	10	1	38	3
3. Haskovo	298	45	42	3	2
4. Montana	572	73	68	3	-
5. Pazardjik	424	22	16	16	-
6. Pleven	560	34	32	5	2
7. Plovdiv	589	56	52	8	2
8. Rousse	445	69	56	21	2
9. Shoumen	335	78	95	25	-
10. Smoljan	381	25	15	3	-
11. Sofia	1,213	58	36	19	3
12. Stara Zagora	326	30	22	13	1
13. Varna	834	95	140	4	6
14. V. Turnovo	458	42	40	5	1
15. Vratza	257	26	26	6	2
TOTAL	**7,330**	**707**	**673**	**174**	**27**

work which is organised, has applied software and databases, is compatible with other networks and is centralised.

Almost 80-90 percent of environmental information is kept by the MoEW and its various branches; the RIEWs and BEEA in particular. The information system is under development, but the data that is available is stored in electronic form (60 percent) and on hard copy. Three types of database software are operated: MS Access, d-Base and Oracle. Since the different databases are not compatible, it is envisaged that in the future, the available information will be processed entirely by Oracle.

The needs for data storage and retrieval are as follows:

- software for databases;
- training in use of databases;
- computer hardware; and
- industrial activities inventory.

Environmental Monitoring System, Access to Information

The BEEA was established to carry out and coordinate the information and monitoring services regarding the control and preservation of the environment in Bulgaria. The BEEA is the governing body of the National System for Environmental Monitoring (NSEM) and is the National Reference Centre for the European Environment Agency. The BEEA is managed by an executive director and has 120 employees. At the regional level, the NSEM is operated by the 15 RIEWs. Thus, through NSEM, the BEEA is carrying out indirect oversight of the environment. (See Figure 5.)

National System for Environmental Monitoring[15]

The NSEM, administrated by the Environmental Executive Agency, covers the whole country and supports a database on both national and regional levels. The system provides timely and reliable information on

environmental matters. On this basis, analyses, assessments, and prognoses for activities relating to preservation and conservation of the environment are prepared.

The primary data from the local networks of the NSEM is obtained through automated stations and conventional sampling sites. After reliability assessment, this information is submitted to local databases via manual or automated input. Following the necessary processing, the information is transferred via telex to the BEEA. At present, real-time data is valid only for the automatic stations for gamma-background radiation and for two of the air quality stations. Monitoring data is centralised in the National Database of BEEA which is not currently integrated by components.

Air[16]

Ambient Air Quality Control

The National System for Quality Control of the Ambient Air consists of 66 stationary monitoring stations located at 37 installations, of which 16 are automated stations for ambient air quality checks, and five are OPSIS systems. The system for ambient air quality monitoring also includes six mobile automatic stations equipped to take measurements in different parts of the country. The system for ambient air quality monitoring operates in a uniform and consistent way.

The basic components that are measured include: total suspended particulates, sulphur dioxide, nitrogen dioxide, hydrogen sulphide, lead aerosols, ozone, carbon monoxide, ammonia, chlorine, aerosols of hydrochloric acid and sulphuric acid, phenol, arsenic aerosols and heavy metals. All automatic stations also measure meteorological data — temperature, humidity, wind direction and velocity, solar radiation, and atmospheric pressure.

Emissions control

Large commercial operations are required to monitor themselves. Mandatory checks for harmful substance emissions of 150 large industrial enterprises are carried out annually by RIEWs. There are four mobile automated stations and eight mobile analysers for emission control. Statistical data is also collected and analysed for more than 2,000 industrial enterprises and other sources of emissions, in accordance with the classifications of the EU. The BEEA also receives data from the National Statistics Institute.

EUROAIRNET incorporated Bulgaria into the EU Environmental Monitoring and Information Network of the EU (concerning air pollution) in 1997. Forty-two measuring points from NSEM are included in the European network. This information is collected, processed and reported on by the BEEA in terms set out by the European Environment Agency.

Water[17]

Surface Water Monitoring

The National Network for Surface Water Monitoring consists of 250 sampling sites for manual sampling and three automatic stations at the Struma, Mesta and Maritsa rivers for observation and control in real time.

The sampling sites are categorised according to their location as follows: 49 background sampling sites, 114 ordinary sampling sites, 22 impact sampling sites, 12 border sampling sites, 24 dam sampling sites, eight lake sampling sites and 24 coastal sampling sites. Samples are taken monthly at all sites, except the background sites where the sampling is seasonal — four times a year. The samples are analysed based on the specific parameters included in the governing legislation (Regulation Nos. 7 and 8 on coastal water).

The main measurements are of temperature, pH levels, dissolved oxygen, oxygen saturation, electroconductivity, COD — manganese, BOD, nitrogen indexes, phosphorus content, dissolved and suspended solids, COD — chromium, chlorides, sulphates. Additional parameters, specific to each site and dependent on local

FIGURE: 5

Resources available for operation of the NSEM[19] in 2001

Lab equipment, chemicals, spare parts,operation of the monitoring stations (in BGL)	New equipment provisions (in BGL)	Sampling and inspections (in BGL)	Improving of the information system (in BGL)	Maintenance of technical systems (in BGL)
5,104,213	162,471	369,619	81,000	53,000
TOTAL				**5,770,303**

human activity, include levels of heavy metals, detergents, phenol, cyanide, petroleum products, pesticides and polyaromatic hydrocarbons.

Biological monitoring of surface waters

Biological monitoring of surface waters started in 1992. At present, 1,200 sampling sites have been designated along the rivers at intervals of five to 10 kilometres. The Biotic Index is used for assessing the quality of surface water according to five levels. This method provides the opportunity for long-term integral assessment of pollution through analysis of sensitive benthic macroinvertebrate communities.

Microbiological monitoring of surface waters

Microbiological monitoring of surface waters is carried out three areas of the country — Sofia, Stara Zagora and Smoljan. The sampling sites are identical to the network's sampling sites for physical and chemical monitoring of surface water and the sampling frequency is the same. The microbiological parameters are analysed according to Regulation No. 7 (*State Gazette* 96/1996): total bacteria, total coli-forms, thermo-tolerant coliforms and pathogens.

After measurement points for surface water in Bulgaria were designated according to the requirements of the European Environment Agency, the country was included in the European monitoring network for waters, EUROWATERNET. The Bulgarian part of EUROWATERNET includes three automatic stations situated on the Struma, Mesta and Maritza Rivers.

Ground Water Monitoring

This network covers 234 observation sampling sites where samples are taken two to 12 times a year, according to parameters outlined by Bulgarian State Standard 2823 of 1983 concerning drinking water. This standard implements a basic program for monitoring. At some sampling sites, measurements are taken for other substances related to the particularities of the area.

The basic monitoring programme includes measurements of: temperature, pH level, alkalinity, COD — Manganese, electroconductivity, redox potential, cumulative hardness and dissolved and suspended solids. Measurements are taken of all the major ions — calcium, magnesium, chlorides, sulphates, hydrogen carbonates, carbonates, ammonia, nitrite, nitrate, phosphates, total iron, and manganese. Additional parameters include the following non-organic pollutants: selenium, fluorides, sulphides, cyanides, natrium, potassium, barium, heavy metals and arsenic. Organic pollutants subject to monitoring include total extractable substances, petroleum products, surfactants (anionic detergents and non-ionic detergents), phenols, poly-aromatic-hydrocarbons (PAHs), and organo-halogenated substances (chloroform, polychlorinated biphenols (PCB) and organo-chlorine pesticides).

The Bulgarian part of EUROWATERNET's monitoring network for groundwater was developed in May 2000. A total of 74 water bodies have been designated and information about their hydrology, including minimum, annual and maximum rainfalls, and geological characteristics, is currently collected.

Underground Resources, Land and Soils

Soil pollution with heavy metals and metalloids

The national network for observation and control of soil pollution with heavy metals and metalloids was organised according to pollution sources. The total number of sampling sites in the network for observation and control is 339, divided by pollution source as follows: industry (100), application of chemicals (99), irrigation (60), and motor transport (80).

The main observed pollutants are lead, cadmium, zinc, copper, and arsenic. Additional assessments are carried out where there are concentrations above the maximum permissible concentration or there are mobile forms of the elements. The soil samples are taken and analysed in accordance with ISO standards.

Soil pollution with organic compounds

A project was launched in 1997 for monitoring of soil pollution by three groups of organic compounds: poly-aromatic-hydrocarbons (PAHs), polychlorinated-biphenols (PCBs) and organic chloro-pesticides. The network includes monitoring sampling sites for the control of pollution from heavy metals from industry and agriculture. Gas-chromatographic analyses are made according to ISO/CD 10382.2. In September 2000, the network was reduced to 20 sampling sites, including 11 for spot sources, four for linear sources, and five for background sources. The observation period is three years.

Soil acidification

In 2000, a project for soil activity monitoring in Bulgaria was launched, covering 70 testing grounds. The sampling frequency is dependent on soil type and is conducted every one, two, three or four years. The samples are taken at two depths. They are analysed with respect to soil activity (pH in KCl) and the content of ion-exchange ($H+$, Al_3+, Mn_2+, Ca_2+, Mg_2+).

Soil salinity

A project was also launched in 2000 for soil salinity monitoring. The monitoring network includes 13 testing grounds and has been organised on the basis of salinity type.

Soil erosion

There is a project under way according to which soil erosion monitoring is to be organised with relevance to the three types of erosion – water, wind and irrigation.

Radiological Control[18]

National Automated System for Radiation Control in Real Time

The National Automated System for Radiation Control in Real Time in Bulgaria was created in 1997 to meet international obligations concerning the safe utilisation of nuclear energy for peaceful purposes, and to serve the monitoring of trans-border transmissions of nuclear materials. The system is completely automated and has a hierarchical structure. It consists of 26 local gamma background monitoring stations (LMSs) covering the entire country. There is a higher density of monitoring stations around the Kozloduy Atomic Power Plant. All LMSs are supplied with measurement and communication equipment. Related structures also include the National Reaction Centre within the Permanent Commission for Population Protection in Case of Disasters and Accidents (Civil Defence Department) established by the Council of Ministers.

All information concerning the operation of the measuring and communication facilities of LMSs and the measurements taken are collected, processed and stored in the database of the BEEA Central Monitoring Station. They are then transmitted to the users of the system. A mobile monitoring station is maintained to be used in the event of accidents.

Monitoring is carried out according to the following parameters: sediments; waste; content of natural and artificial radionuclides in soils; radon over the deposits of the mining industry; radionuclides in ambient air; total activity; and ground- and surface water content of uranium, radium and tritium.

The needs for monitoring and sampling are as follows:

- training in modern sampling techniques and
- quality assurance, especially with respect to the automatic monitoring stations.

Distribution of environmental information

Access to information is regulated by the Access to Public Information Act (*State Gazette* 55/2000). In general, the information is provided in a primary form but it is also available in pre-processed form or, in some cases, processed according to request. The new Environmental Protection Act includes a special Chapter (II) related specifically to provisions on access to environmental information.

According to provisions of the current Environmental Protection Act, available information that already exists in forms of bulletins, annual reports, legislation, and other MoEW publications, is available free of charge. In most cases, such information may be downloaded from the websites of MoEW or BEEA[20] free of charge. Examples include the daily bulletins on air quality and gamma-background, quarterly and annual bulletins on the state of the environment, etc.

While some publications are provided free of charge, others are offered for a small charge. Examples include the Annual Bulletin on the State of the Environment (BGL 5), Annual Report on the State of the Environment ("Green Book" — BGL 5), and the Quarterly Bulletin on the State of the Environment (BGL 3). Information is also submitted free of charge to members of the National Assembly, municipal bodies, and to undergraduate, post-graduate and Ph.D. students.

The information transmitted to state organisations normally follows preliminary signed inter-institutional agreements for information exchange. In most cases these concern the transfer of primary information.

When there is a request for specially processed information, the price shall be agreed upon in advance on a case-by-case basis, depending on the information type and designation. When primary information is provided, the fee should be 10 percent of the cost of the analyses performed, plus the costs for transmitting the data. It is not possible for the fee to be based simply on the average monthly salary of the employee involved in handling the request because the cost strongly depends on the expenditures for collection and maintenance, type and number of parameters, methods for obtaining the information, etc.

Various specialised annual monitoring reports containing environmental information are also published.

Published and/or electronically accessible reports are as follows:

- daily bulletin (available only on the BEEA web page);
- quarterly bulletin on the state of the environment;
- annual bulletin on the state of the environment;
- annual report on the state of the environment (hard copy and electronically);
- Bulgarian-Romanian information bulletin (published every six months, hard copy only); and
- monthly information bulletin of the MoEW (hard copy).

Format of requesting information

According to the MoEW's rules, information is only provided upon receipt of written request that precisely describes the type of information requested and the purposes for which it shall be used.

At present, it is not possible to accept information requests sent via electronic carriers, because systems for handling such requests have not yet been developed.

The BEEA has installed a special public server in order to facilitate data exchange, but the system requires that the available and incoming data be inputted in certain designated types and formats. One problem is that the available servers are of low capacity in respect to their specifications (RAM 64MB and HDD 4 + 2.6MB), and another is that the databases vary in software and applied nomenclatures, which makes them incompatible.

Efforts to reach various users

Except for the above-mentioned reports and means of dissemination, the MoEW manages two information centres (located at MoEW and BEEA) and two websites. These are the means for providing to the public a wide range of useful environmental information, including legislation, projects, initiatives, web links in the forms of user groups, and other types of intranet activities, such as those in the CIRCLE of EIONET network.

The publication *"Who is Doing What for the Environment,* published by MoEW and the Regional Environmental Center for Central and Eastern Europe (REC), is being updated and will be available on the MoEW website together with a list of contact addresses of institutions producing environmental data.

The time frame for answering information requests

The time frame for responding to information requests is established by the Access to Public Information Act. According to the provisions of Chapter 3, Part 2, Article 28 of the Act, every institution has to respond to requests for information of public interest within 14 days. In cases where the authority does not possess the information requested or additional data is required, the response period may take up to one month as per Chapter 3, Part 2, Article 29 of the same Act.

Legal reasons for information denial

A decision to deny requests for environmental information may be made for the following reasons:

- the request is for information that contains state secrets, or confidential business information;
- the request contains opinions and positions in regard to ongoing or future negotiations, or data relevant to them;
- the request concerns the interests of a third party that has not granted consent; or;
- the information was already provided to the applicant during the previous six-month period.

All these exemptions are detailed in Chapter 3, Part 3, and Article 37 of the Access to Public Information Act.

Appeals procedure for non-response or refusal to grant information

The legal procedure for appealing denials or failures to provide environmental information is given in Chapter 3, Part 4, and Article 40 of the Access to Public Information Act. According to this provision, such a denial may be appealed in the district courts or Higher Administrative Court. If the court establishes that the denial is unlawful, it can fully or partially reverse the decision and oblige the institution to release the requested information. According to Article 42 of the Act, the officials in charge, who without giving reasons, do not provide in due time a response to the request, or who do not observe a court decision on information access, are subject to fines of various amounts. In the new Environmental Protection Act, all types of denials are explicitly described.

Compliance Assessment

As it can be concluded from the previous chapters, the procedures for assessing environmental compliance are related to both planned checking of self-monitoring data from industrial activities and complaint-driven inspections, carried out by the enforcement bodies within the system of the MoEW and the RIEWs.

The needs for compliance assessment are as follows:

- development and implementation of strategy on compliance assessment on the basis of compliance indicators.

Enforcement Performance and Reporting Capabilities

The major tools for assessing the "demonstration value" of specific enforcement activities are as follows:

- average number of citations issued (1,800);
- fines imposed against polluters per year (450); and
- the amount of fines collected (EUR 1,700,000 in 2000).

There are no statistics available on the number of court cases won.

In general, improvement of the state of the environment is not linked to the enforcement responses when reported. The annual state of environment reports reflect the state of the environment only and need to be

indicator-based and organised in the DPSIR (Driving Forces, Pressures, State Impact Responses) scheme.

The needs for enforcement indicators and reporting capabilities are as follows:

- indicator-based reporting; writing of annual reports; and
- credibility-testing "peer" reviews.

Needs Assessment: Summary of Current Problems[21]

The current problems faced by the authorities relating to the implementation and enforcement of the environmental legislation are mainly with respect to:

- human resources and training of personnel;
- technical equipment, hardware/software upgrading and improvement of existing information systems; and
- databases and, in particular, environmental information in electronic databases.

All of the above are related to limits of available financial resources.

Human resources

In various recent reviews of the state of progress in the environmental field, it has been emphasised that the available human resources for dealing with implementation and enforcement of the new environmental legislation, as well as with the operation and maintenance of relevant databases, are insufficient. Moreover, due to the turnover in trained personnel, an important problem is the need for continuous training and updating of rapidly developing information technologies.

Training

The lack of trained personnel for environmental monitoring, inspections and information dissemination is related to the fact that an enormous amount of legislation (more than 70 acts and regulations) has been fast-tracked through Parliament in the last four years alone. Therefore, the staff needs regular training or assistance in:

- implementation of the new environmental legislation, especially the law related to integrated pollution prevention and control provided for in the IPPC Directive;
- development and implementation of a new generation of public information systems;
- structuring and processing information according to the EU requirements for reporting;
- implementing an indicator-based approach to assessment of the state of the environment; and
- development of a core set of indicators for the preparation of national environment reports.

Experts involved in the monitoring and reporting system in Bulgaria agree that there is a need for in-depth study, reassessment and further development of the existing monitoring system, of its structure and scope, and of the overall environmental information system.

Financial resources and technical equipment

A complete financial balance sheet for the development and operation of the necessary information systems has not been made. Part of the necessary infrastructure was purchased through the PHARE programme in 1994-1996; thus it is outdated and does not meet the increasing needs of the BEEA. Substantial repair, renovation and acquisition of spare parts are required.

On an annual basis, requests are made for funding from the national budget and the National Environmental Protection Fund (NEPF) (in amounts ranging between BGL 100,000–150,000) for specialised servicing, spare parts, hardware, software, and communication support. Unfortunately, the available funds are insufficient. One disadvantage to planning in this area is the lack of a special budgetary line in the state budget and/or the NEPF, covering the establishment and operation of information systems.

The implementation of new environmental legislation requires revisions of software application programmes, which creates difficulties in information processing, and delays tasks which otherwise could be completed on time.

The lack of GIS prevents the collection of information on population, agricultural area, forests, and other aspects in relation to environmental components. The development of GIS was included as an important task in the BEEA Work Plan for 2002.

There are still problems in relation to the reliability of quality control data, especially with respect to automated monitoring stations. These include a lack of staff in calibration laboratories, accreditation of those laboratories, lack of money for consumables, and service for automatic stations.

Conclusion

Bulgaria has already adopted most of the basic regulations and is working on others that are meant to ensure compliance with EU environmental legislation by the end of 2002. Even though this represents reasonably good progress over two years, EU harmonisation is

just the first step of a complex, lengthy and expensive process. Implementation of EU-based legislation is the real challenge for the accession countries in general and Bulgaria in particular. Being aware of this, the country is ready to make the necessary efforts with necessary outside help to achieve the ambitious task of implementing and enforcing this voluminous and dynamic collection of environmental laws and regulations.

ENDNOTES

1) Data is taken from the ISPA Strategy 2000, available at the MoEW's web page <www.moew.govrn.bg>

2) Data is taken from the ISPA Strategy 2000.

3) Data is taken from the Annual State of Environment Bulletins for the respective years.

4) The obvious difference from previous years is related to the newly adopted classifications of waste. With the adoption of Order RD-323/1998 of the Ministry of Environment and Water and the Ministry of Health on waste classification (*State Gazette,* No. 120/1998) — available on the Ministry web pages — Bulgaria has taken the European Waste Catalogue (Decision 94/904/EC) as its national waste classification.

5) Available on the MoEW's web page: <www.moew.govrn.bg>.

6) MoEW's organizational chart (last up-dated according to the administrative structure adopted with Decision of the Council of Ministers – State Gazette No 91/2001) appears in Annex 1.

7) BEEA Chart provided as Annex 2

8) Explained in detail in the Chapter on Environmental Monitoring

9) Information provided by the Directorate for Control of the RIEWs within the MoEW

10) In alphabetical order

11) Information provided by the Directorate for Control of the RIEWs within the MoEW

12) EUR 1 = BGL 1.96 (Central Bank rate)

13) The MoEW is the competent authority to take final decisions on imposing sanctions amounting to more than BGL 2000.

14) Information provided by the Directorate for Control of the RIEWs within the MoEW

15) Information provided by the Monitoring and Sustainable Development Directorate within the BEEA

16) Information provided by the Monitoring and Sustainable Development Directorate within BEEA

17) <www.nfp-bg.eionet.eu.int>

18) Based on (and presenting in detail) what has been identified in the different chapters of the Report

REFERENCE DOCUMENTS

National Environmental Strategy and Action Plan 2000-2006, MoEW, PHARE Programme, 2000

ISPA Strategy for Environment 2000

Review of the environmental protection results, UN, 2000

Green Books 1997, 1998, 1999, 2000

Abbreviations and Contacts

LIST OF ABBREVIATIONS

BEEA	(Bulgarian) Executive Environment Agency
EIA	Environmental impact assessment
EPA	Environmental Protection Act
MAF	Ministry of Agriculture and Forestry
MoEW	Ministry of Environment and Water
MoH	Ministry of Health
NSEM	National Environmental Monitoring System
NEPF	National Environmental Protection Fund
NGO	Non-governmental organisations
NMHI	National Meteorology and Hydrology Institute
NSI	National Statistical Institute
RIEWs	Regional Inspectorates of Environment and Water

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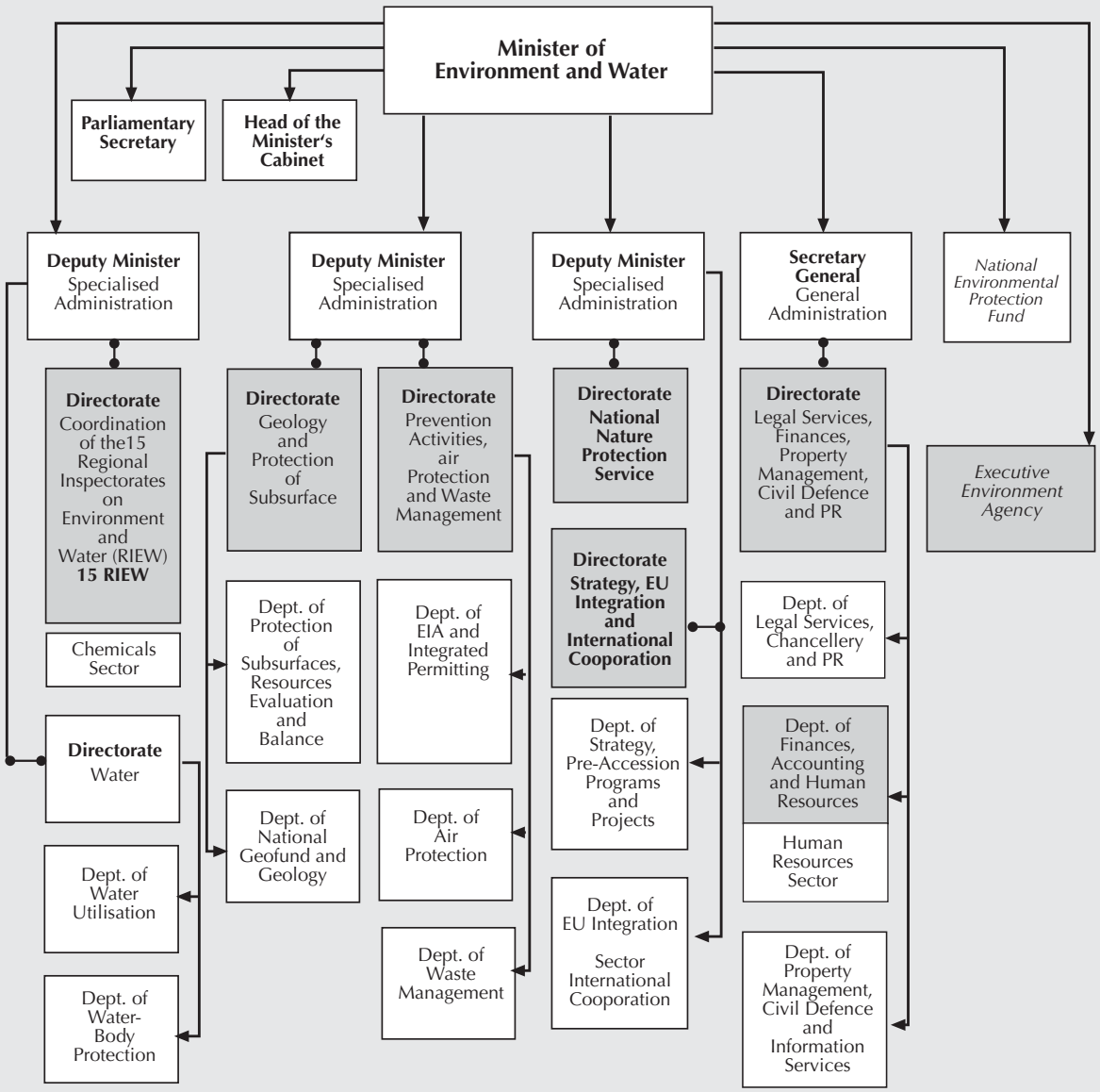
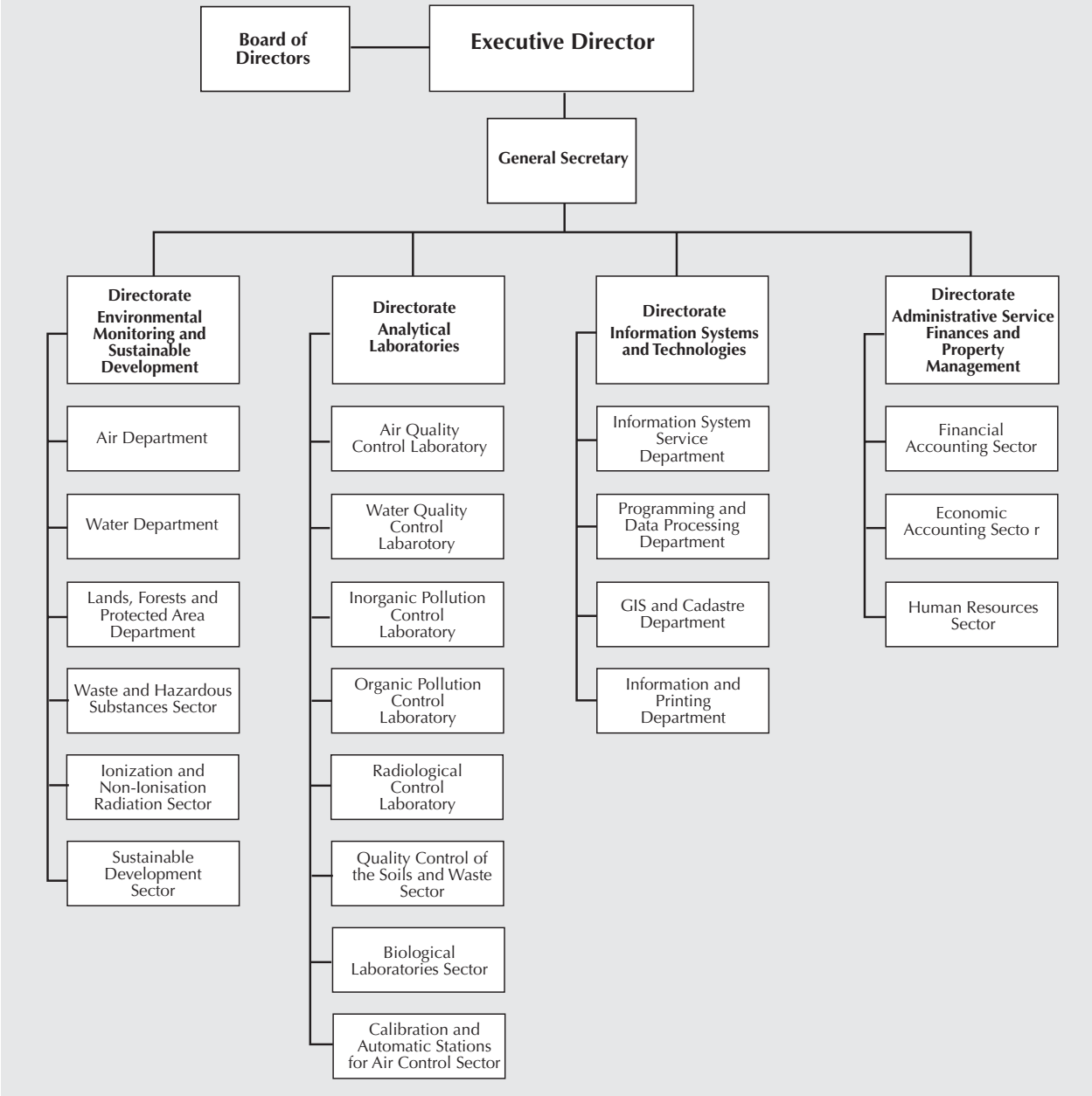
Annex 1: **Structure of the Ministry of Environment and Water**

FIGURE 6



Annex 2: **Structure of the Executive Environment Agency**

FIGURE 7



Country Profile: **Croatia**

Prepared by
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April 2002

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Country Profile: **Croatia**

Introduction

This report is based on the Environmental Strategy that accompanies the National Environmental Action Plan adopted by the Croatian Parliament in 2002. It also relies on interviews and the *Report on the Current Legal Structure and Resources Available to the Inspectorate in Croatia*.

General Information

Air

Air emissions have been reduced during the last 10 years and air quality has improved. The main reason is the economic recession (caused by war) and the initiation of economic reforms. In comparison with other European countries, Croatia's per capita emissions are low and, as regards trans-boundary movement, the country is mainly an 'importer' of sulphur oxides (SO_x) and nitrogen oxides (NO_x).

In 1998, emissions of principal pollutants into the atmosphere were considerably lower than in 1990: sulphur dioxide (SO_2) emissions were down by 50 percent, nitrogen oxides (NO_3) by 13 percent, non-methane volatile organic compounds (NMVOC) by 25 percent, carbon monoxide (CO) by 47 percent, methane (CH_4) by 27 percent, ammonia (NH_3) by 37 percent and carbon dioxide (CO_2) by 16 percent. Ninety-two percent of SO_2 emissions are a product of combustion. The NO_x emissions are mostly caused by transport (63%). The majority of NMVOC emissions come from natural sources. The main source of ammonium emissions is agriculture (more than 70 percent). NH_3 emissions are slowly but continuously decreasing, mainly because of a reduction in the number of livestock. CO_2 emissions in 1998 were 20.4 megatonnes (Mt), showing a trend toward an increase. Methane emissions from natural sources — which make up about half of total emissions — are constant, and those from agriculture are decreasing. nitrous oxide (N_2O) emissions are also mainly from agriculture (60%).

Croatia is party to the UN Framework Convention on Climate Change and belongs to the group of countries that have committed themselves to keeping the level of greenhouse gas emissions down to 1990s levels. Croatia also ratified the Kyoto Protocol and committed itself to reduce greenhouse gas emissions to 1990s levels (95 percent of the present level) in the period from 2008 to 2012. Among heavy metal emissions, lead (Pb), cadmium (Cd) and mercury (Hg), the highest emissions are those of lead — mainly from transport (98 percent). Leaded petrol will be banned by the year 2005. Sulphur and nitrate precipitation was registered in the area of Gorski kotar and parts of northwest Croatia.

Chloroflourocarbons (CFCs) that deplete the ozone layer are completely imported. Total per capita consumption of these substances is about 0.09 kilograms, which is significantly lower than that of developed countries. Being party to the Montreal Protocol, Croatia is committed to gradually abandoning the use of CFCs and halons by the year 2010.

The existing air-quality monitoring network in Croatia covers about 38 percent of the country's population and 90 percent of the urban population. Air pollution is categorised as excessive (category III) in 15 percent of the country's towns; medium (category II) in 60 percent of towns; and clean or slightly polluted in 25 percent of towns (category I). Excessive or medium pollution has been recorded in the cities of Zagreb, Sisak, Rijeka, Split, Sibenik, Pula and Kutina. So far, only four monitoring stations have been equipped with automated monitoring devices.

Inland Waters

Croatia is rich in water resources and has relatively wide rivers and a karst area that is particularly important for the water cycle. The per capita water volume is assessed at approximately 7,000 cubic metres. But if one takes into account border- and cross-border waters, (not including the Danube and Neretva rivers), the figure comes to 17,000 cubic metres. Potable water reserves are relatively large and 85% of water for water-supply systems is tapped from the ground. Seventy-three percent of the population is connected to the public water system.

Six out of 10 people, mainly those living in cities, are connected to a sewerage system. The typical sewerage system is a combined drainage system. In rural

settlements, wastewater drainage mainly flows into septic tanks.

The quality of river water is generally below desired levels. The number of municipal wastewater treatment plants in Croatia is small. Even the capital, Zagreb, lacks such a facility. In 1997, only 21 percent of wastewater was treated. Of that, 81 percent was mechanically pre-treated, about 6 percent was biologically treated, and 13 percent was water used in industry that was pre-treated.

Water quality and quantity are monitored through a nationwide monitoring network — one that needs to be upgraded.

Underground waters have yet to be sufficiently studied.

Flood defences cover approximately 500,000 hectares. There are more than 460 torrents (rivers prone to flooding) that are partly regulated or in need of regulation. Flood and torrent management should be a national priority.

Waste

About 9 million tons of waste are generated annually (two tons per capita). Three-quarters of waste is process waste. The share of municipal waste in total waste is 13 percent, while sorted secondary raw materials (over 95 percent comes from process waste) make up 11 percent of total waste. Landfills are the only means currently available for solid waste disposal.

Organised municipal waste collection is available to less than 60 percent of the population. About 98 percent of total disposed waste ends up in 160 official (large) dumping sites, which, with rare exceptions, have not been adequately designed and, as a consequence, have no basic protective measures. In 80 dumping sites, hazardous waste is mixed with municipal waste, and environmental pollution has been clearly detected at 40 dumping sites. Only seven landfills have been granted operating licenses.

Methane (landfill gas) emissions from landfills make up 4.5 percent of total greenhouse gas emissions in Croatia.

Recovery projects have been initiated at several industrial and hazardous-waste landfills. Almost nothing has been done about municipal waste-dumping sites that should, pursuant to Croatian regulations, be either converted into landfills or closed down by the year 2002. No hazardous-waste landfill has been built, and no more than 10 percent of hazardous waste is disposed in a regular and adequate manner. Only in Zagreb has the implementation of integrated waste management been initiated to any extent.

Nature Conservation

Due to its geographic position and diversity of terrain, Croatia has an abundance of different habitats and ecosystems, especially considering its size. One such specific habitat is the karst region.

About 8 percent of the territory is under some sort of protection. Of the 325 protected areas, eight are national parks, 10 are nature parks and two are strictly enforced reserves. Horticultural landmarks (114) are the largest group. About 400 endemic plants and mushrooms and about 40 animal species have been recorded. An increasing number of species is endangered. These include 226 species of spermatophytes and 41 species of mammals. The state demonstrated its commitment to nature conservation by passing the National Biological and Landscape Diversity Strategy and Action Plan in 1999.

Soil and Forest

Of the total land area of Croatia (5,654,256 hectares), arable land covers approximately 50 percent, forest land 44 percent, and non-arable land 6 percent. According to statistics, arable soil loss totalled 203,000 hectares (5,205.12 hectares per annum) in the period between 1959 and 1998. However, the total area of meadows, mire, reed land and fishponds increased by 44,000 hectares, giving a net arable soil loss of 159,000 hectares (4,076.92 hectares per annum) in that period.

Approximately 85 percent of forest land has great manufacturing potential. Forests are mainly a result of natural growth. Considerable damage occurred between 1992 and 1998, with each year seeing damage done to 15.6 percent to 30.3 percent (in 1995) of trees. There is a slight trend towards an increase in the damage being done. In 2000, damage was registered on 21 percent of the various tree species. However, forest degradation in Croatia has never exceeded the European average.

Forest fires are a particularly difficult problem, and they occur most frequently in the coastal area. During 2000, 33,212 hectares were consumed by forest fires, mainly in southern Croatia. Of that, 25 percent was high and low forests. During the war, 243,700 hectares of forests were planted with land mines, 12 percent of total forest land.

Coastal and Island Areas

Most of the Croatian Adriatic is still oligotrophic and clean.

In the northern Adriatic, rather intensive algae blooming, resulting from increasing eutrophication, was recorded in the summers of 1988, 1989, 1991, 1997 and 2000. Algae blooming was also registered in some parts of the central Adriatic Sea.

Nutritive salt concentrations come mainly from rivers flowing into the north Adriatic rivers, with the river Po contributing to over half of total phosphorus and nitrogen, i.e. approximately 75 percent of inorgan-

ic forms of nutritive salts. The majority of this import is of anthropogenic origin.

Centralised sewerage systems have been built only in larger urban and industrial centres. Less than 35 percent percent of wastewater is collected in the sewerage systems, and less than 10 percent is treated in wastewater treatment facilities.

Another specific problem is that of illegal development — a nation-wide phenomenon — particularly in the coastal vicinity. No efficient mechanisms have been set up for addressing the problems caused by such building activity, although enormous efforts have been invested in its prevention.

The islands are the most economically unsustainable parts of the coastal region. Regardless of the National Strategy of Island Development, state measures for the improvement of their position have produced no positive results. Human emigration and depopulation are still predominant characteristics of the Adriatic islands.

Fires are one of the greatest dangers in this region.

Chemicals Management

There is no existing framework legislation on chemicals that can be used as a guideline for improvements or elimination of deficiencies resulting from the sectoral approach in chemicals management. Slowly, but surely, the number of companies introducing health security and environmental protection programmes (HSE programme and the ISO 9000 and 14000 certificates) is increasing.

Scientific research has failed to produce a sufficient basis for analysing the properties of new chemicals. No information system has been set up for the exchange of information regarding the movement of hazardous chemicals and hazardous chemical waste. Designation and packaging systems are also inadequate.

Transport

Most of Croatia's transport is road-based, but the vehicle fleet is obsolete and the fuel quality is below that of developed countries. Due to its impact on air quality, transport is one of the major health and environmental risks in urban areas. This is due primarily to the low quality of liquid fuels (high concentration of lead, sulphur and benzene), the improvement of which is a high priority. Public transport has decreased by approximately 50 percent in the last decade. Development of new roads is on the increase, while particular attention in this respect will be given to the protection of karst regions.

Economy

No mechanisms have been set up to encourage the adjustment of the economic sector to cleaner production. A relatively small number of companies have ISO 9000 and ISO certificates.

Legal, institutional and technical frameworks have been set up for prevention and response in relation to accidents at work, the transportation of harmful substances, explosions and fires, accidental water contamination, accidental sea contamination and other environmental accidents. A system has been developed for the implementation of the Environmental Emergency Plan, National Water Protection Plan, and Contingency Plan for Accidental Marine Pollution in Croatia. Headquarters for emergency response have been set up both on the national and regional (county) levels, and communication units, emergency action units and expert units have been set up.

Biological Safety

Apart from industrial biotechnology for genetic modifications of micro-organisms important for industry, no commercial genetic modifications are made on plants and animals in Croatia. However, it is possible to import genetically modified organisms from neighbouring countries. For that reason, a special law should be drafted.

Radiation

According to the International Atomic Energy Agency criteria, Croatia is listed as a Type-B. Radioactive materials are widely used in industry, medicine and research, but there are no commercial nuclear reactors. Storage of low and medium-level nuclear waste has not been resolved, but temporary repositories are both safe and well organised. Currently, about 50 cubic metres of depleted ionised radiation sources and other used radioactive substances are stored in temporary repositories, and their activity is approximately 1.4 terabacquerel (TBq). Preparations have been carried out for the selection and construction of a permanent storage facility.

The field of non-ionising radiation is not regulated by law.

Noise

Noise protection has been insufficiently addressed in Croatia, particularly in the early phases of planning and development. There is a lack of data on noise emmissions that have been registered during monitoring. The major noise sources have not been determined, nor the number of those affected by this type of

'pollution'. Neither has it been delineated who should oversee the matter. The Ministry of Health has initiated drafting of the Law on Noise Protection. The establishment and improvement of the noise protection system, as well as the implementation of its measures, are among the main objectives of the Croatian Action Plan on Environment and Health.

Environment and Public Health

Pollution of air, water and soil, inadequate waste management practices, excessive noise and exposure to non-ionising and ionising radiation, have caused an increase in the number of sick people, as well as a degradation in the condition of those already ill. It is estimated that poor potable water quality affects the health of about 10-15 percent of the population.

Microbiological pollution of food has caused occasional epidemics. The major causes of epidemics are salmonella and toxic staphylococci, and the parasite trichina.

Leaded petrol is still widely used in Croatia, and is a possible public-health hazard, particularly to young people.

A particular risk left over from the war are land mines. According to estimates, about 10 percent of the territory is mined.

Institutions and Legislation

Institutional organisation is still inadequate for the implementation of the principles of sustainable development. The Ministry of Environmental Protection and Physical Planning needs to broaden its authority. There is still no specialised environmental agency. According to plans, such an agency should be established in 2002. The environmental information system has not been set up. There is no systematic financing framework, and the majority of laws and regulations need to be harmonised with European Union (EU) legislation. A special environmental fund is in the process of being established. Neither in the public domain nor in other sectors have sustainable development principles been sufficiently integrated. Awareness-raising campaigns and promotion of wider public involvement in daily political life and environmental concerns will have to be carried out on a more permanent basis.

Environmental Protection Priorities

A series of actions and enormous investments have to be carried out in order to improve the quality of the environment. As expected, solid waste and wastewater management are the priorities. Considerable investments (e.g. construction of a series of new landfills and recovery of existing ones, urgent construction of sewerage systems in 70 towns and construction of 20 wastewater treatment plants) will have to be made in the coming years. Special attention has to be given to hazardous-waste disposal. Air quality will be improved through the use of fuels with zero or reduced levels of lead and sulphur. Additionally, Croatia will encourage environmentally friendlier means of transportation for goods and passengers. Institutional strengthening will be of particular importance and among other things, will include the establishment of an environmental agency and environmental fund. This will also include the setting up of a comprehensive, unified monitoring and information system, as well as the training of personnel. Natural resources and the management of protected areas need considerable improvement.

National and Local Levels

Sustainable development is not achievable unless all the stakeholders are involved. It is very important to ensure good conditions for involving stakeholders, and to mobilising various sectoral policies. Furthermore, collaboration of the administration with other target groups and other states must be ensured.

On the national level, government policy must incorporate environmental principles into all other policy areas which directly or indirectly affect sustainable development[1].

Close cooperation is necessary between different administrative levels. It is also necessary to clearly define the division of authorities and responsibilities. It is particularly important to ensure the equal standing of smaller communities (administrative units) with larger ones.

It is not possible to achieve sustainable development on a global level unless it has been attained on the local level. Most environmental concerns are identified on the local level, and this is where the general public has the most influence. The local level is also where authorities can affect changes in behaviour, production, consumption and use of space.

Croatia, like all other countries in transition, faces a problem of inefficient regulation and administration, including that of the environmental field. Other sectors, particularly the private sector, are better organised and exploit the weaknesses of environmental administration.

The sphere of environmental protection is regulated by different administrative bodies, each with strictly defined powers and jurisdiction, thus preventing an integrated/sustainable approach to environmental protection. This refers primarily to water resource administration (which has always been an independent unit), nature conservation, environmental protection and physical planning. Since 1990, administrative bodies dealing with physical planning, environmental protection and nature conservation have been established in an attempt to resolve this problem. In 1990, the Ministry

of Building, Environmental Protection and Housing encompassed the departments of Environmental Protection, Nature Conservation and Physical Planning. Although the environmental protection field has gained importance on the global scale, in Croatia there is increasing internal division. This problem was exacerbated when the Nature Conservation Department was removed from the ministry's authority. The ministry was later reorganised and the environment fell under the State Directorate for Environmental Protection. This was followed by the re-establishment of the Nature Conservation Department, within the State Directorate. In 2000, the Ministry of Environmental Protection and Physical Planning was established, with the hope of finally creating conditions for efficient implementation of the environmental protection policy. However, environmental protection has been characterised by internecine rivalries between different authorities, even among those who carry out similar activities. Many still insist on sticking to a narrow sector-by-sector approach. In addition to the Ministry of Environmental Protection and Physical Planning, other bodies of state administration (such as the Ministry of Agriculture and Forestry, Ministry of Health, Ministry of Maritime Affairs, Transport and Communication, Ministry of Economy and State Water Directorate) perform within their scope of tasks related to environmental protection. (Annex 1 gives an overview of the internal organisation of the Ministry of Environmental Protection and Physical Planning.)

Some responsibilities have been transferred to the regional level, some to county offices and some to municipalities.

The present state of administrative organisation reveals numerous weaknesses, including:

- the weak position of environmental offices within the state administration;
- the wide dispersal of environmental protection authorities among various departments and institutions with no efficient horizontal coordination;
- institutional barriers to harmonising development policies based on sustainable development principles, and the lack of a sustainable development body[2];
- inadequate organisation and shortage of human resources in all parts of the environmental administration — a deficiency that could stymie efforts to merge with the EU;
- lack of environmental expertise that could help with policy implementation;
- lack of a comprehensive information system, which points to the need for an institution such as the Environmental Agency, which is supposed to come online in 2002;
- insufficient negotiations with stakeholders outside the state administration in passing of legislation, which leads to laws that are unrealistic and cannot be implemented;
- unregulated financing for environmental protection (with the exception of water protection) and a lack of earmarked funds and financial incentives;
- poor coordination between authorities with similar responsibilities (e.g. those who look after water, nature, the environment and soil), and conflicting legislation regarding their work; and
- lack of equipment and insufficient human resources at inspectorates.

Currently, environmental responsibilities are not clearly assigned — a problem underscored in the United Nations (UN) Environmental Performance Review on Croatia (UNECE 1999)[3]. A major problem is the shortage of personnel[4] and their lack of qualifications[5]. Therefore, the establishment of an efficient organisational structure at the Ministry of Environmental Protection and Physical Planning along with capacity building and an increase in responsibilities to encompass all segments of environment, will be the most important priorities in the implementation of the Environmental Strategy adopted in 2002.

Administration

Ministry of Environmental Protection and Physical Planning

The Ministry of Environmental Protection and Physical Planning (MoEPPP) was a product of the Law on Amendments to the Law on Structure and Competence of Ministries and State Government Organisations (*Official Gazette,* No. 15/2000), which came into force on February 5, 2000.

The MoEPPP took over responsibilities of the former Ministry of Zoning, Construction and Housing in areas related to physical planning, site permits, building permits, operation permits, urban planning and building inspection, as well as legal and administrative matters that correspond to all of these. In addition, MoEPPP took charge of the tasks and responsibilities of the former State Directorate for the Protection of Nature and Environment.

Specifically, MoEPPP is in charge of:

- preparing regulations and performing administrative checks and other administrative and expert duties in the field of environmental protection,
- referring to the general environmental policy in providing conditions for sustainable development; protection of air, soil, water, sea life, plants and other animals and the interactions between all of these;

- proposing, promoting and monitoring measures for environmental improvements;
- ensuring maintenance of the pollution cadastre (monitoring);
- managing an environmental information system;
- establishing environmental protection measures and requirements and ensuring compliance;
- waste management;
- preparing proposals for environmental standards;
- carrying out environmental inspection activities;
- supporting environmental education and research;
- carrying out research, surveys and promoting natural heritage sites;
- operating the central information and documentation service;
- determining and evaluating the characteristics of protected natural treasures;
- maintaining central records of protected natural areas;
- prescribing criteria for the establishment of public needs programmes regarding nature protection;
- organising, coordinating and supervising financing of environmental protection;
- evaluating work conditions of legal and natural persons with environmental competencies;
- ensuring favourable conditions for the protection of nature;
- controlling activities including transfer, export and import of protected natural resources;
- determining requirements for the use of protected natural resources, and managing them in compliance with regulations;
- setting special construction requirements in order to protect natural heritage sites;
- performing inspections to ensure proper execution of nature-protection activities; and
- performance of other miscellaneous MoEPPP duties.

At the moment there is no other environmental agency in Croatia, but the MoEPPP is due to begin establishing an Executive Environment Agency at the end of 2002.

Currently, one of the structural units of the MoEPPP is the Inspection Division. Its inspectors have the same rights and duties as other MoEPPP employees. The minister is responsible for all MoEPPP activities.

Environmental Inspectorate

Current Status

The Inspection Division was established in 1995, and it has operated this way since 2000.[6] (See Annex 1.) The Inspection Division has four departments:

- Department of Inspection of Structures under Construction;
- Department of Physical Planning Inspection;
- Department of Environmental and Nature Protection Inspection; and
- Department of Legal Affairs, Monitoring and Execution Procedure.

Within this structure, inspectorate management consists of the following:

- Section of Inspection of State Structures under Construction;
- Section of Inspection of Structures under Construction within the Scope of Regional Units;
- Section of Environmental Protection Inspection;
- Section of Nature Protection Inspection;
- Section of Execution Procedure; and
- Section of Legal Affairs and Monitoring .

The Inspection Division performs inspection controls in the field of physical planning, building, environmental protection and nature protection by controlling the following:

- the work of state bodies and participants during the building process;
- the work of state administration bodies and local government units in the process of drafting, adopting and implementing documents on physical planning and land-use monitoring;
- implementation of environmental protection standards and measures, and the manner and conditions of work of entities authorised to perform environmental protection actions;
- the work of public institutions and persons who manage or execute activities in protected parts of nature or in any other way influence their quality; and
- implementation of other measures to protect biodiversity and nature stipulated by the Nature Conservation Act.

The duties of inspectors at the MoEPPP, along with the above, include:

- supervising implementation of ratified international treaties concerning environmental protection;
- resolving second-instance complaints against first-instance inspection decisions;
- proposing environmental improvement measures; and
- determining guidelines for work and enforcement of the set environmental regulations and measures.

The Inspection Division employs eight senior inspectors and 25 inspectors in county offices who carry out inspection control of implementation of environmental laws and regulations. Along with other duties in the competence of county offices, county-level environmental protection activities are currently performed by one or two officials — one expert adviser and one environmental inspector. For effective environmental protection at the local level, it is critical that the state and local government — especially concerning inspection duties and other administrative affairs — are closely linked. (The list of names, addresses and contacts appears in Annex 3.)

The duties of county environmental inspectors duties include:

- inspection control over the implementation of environmental standards,
- monitoring procedures and emissions,
- implementation of environmental measures, and
- record-keeping, etc.

After establishing the inspection services and new conditions of work that resulted from re-establishing the MoEPPP, a considerable number of direct inspection actions have been carried out in all areas of control. (The *Inspection Report for 2000,* along with some examples, is provided in Annex 4.) MoEPPP should aim for an efficient and systematic implementation of controlling for all its inspectorates.

It is also necessary to establish closer cooperation with other inspectorates, particularly concerning control over maritime resources, waters and water resources, exploitation of mineral resources, etc. For this reason, particular attention will have to be paid to the standardisation of work and the actions of the directorate's inspectorates and individual inspectors.

Regarding joint activities, the adoption of new regulations is an important part of the Inspection Division's work, along with the task of developing a new public image of the inspectorates, particularly the building inspectorate. The latter has attracted general attention due to its more resolute actions against the illegal building.

In addition to its regular activities, the directorate's inspectorates exert control over:

- dumpsites and landfills (as well as the determination of their condition and possibilities of remediation of the existing dump sites);
- those obliged to provide data for air-emission inventory,
- public environmental protection institutions; and
- protected species of plants and animals and endangered habitats outside protected areas.

Since inspection control is a very important MoEPPP activity, it is imperative to provide for regular and continuous checks across the country. This should be done by employing a necessary number of inspectors with adequate qualifications and equipment. The key problems related to inspection activity include:

- uncoordinated work of inspection services in certain ministries (for health, labour, waters, environmental protection and physical planning);
- shortage of environmental protection inspectors, particularly in large industrial centres such as Zagreb, Split, Rijeka and Osijek;
- insufficient number of nature conservation inspectors;
- lack of modern quick-reaction technology and support of information technology; and
- unharmonised regulations underlying the activities of all bodies of the MoEPPP and other inspectorates.

Objectives and Measures

The following measures are: proposed to improve inspectorate activity (O1, see Figure 1 below):

M1-Provide conditions for continuous training and equipping of inspectorates.

M2-Provide conditions for better information flow by setting up the environmental protection information system (EPIS).

M3-Create a more systematic follow-up of stipulations in EIAs and building permits.

M4-Intensify awareness-raising activities and promote inspectorate activities.

To establish closer collaboration with other inspectorates (O2, see Figure 1 below), the following measures are proposed (see Figure 1 below):

M5-Improve cooperation with other inspectorates regarding the control over maritime resources, waters and water resources, exploitation of mineral resources, building and chemical products.

M6-Pay special attention to the standardisation of work and the action of directorate inspectorates and individual inspectors.

FIGURE: 1

Inspection control

Objective		Measures	Level	Responsible organisation	Terms, yrs.
O1	M1	Provide conditions for continuous training and equipping of inspectorates	N,R,L	MoEPPP	LT
O1	M2	Provide conditions for better information flow by establishing the EPIS	N,R,L	MoEPPP	MT
O1	M3	Create a more systematic follow-up of stipulations in EIAs and building permits	N	MoEPPP	LT
O1	M4	Intensify awareness-arising activities and promote inspectorate activities	N	MoEPPP	LT
O2	M5	Improve cooperation with other inspectorates regarding control over the maritime resources, waters and water resources, exploitation of mineral resources, building and chemical products	N,R	MoEPPP MMATC SWD	ST/ LT
O2	M6	Pay special attention to the standardisation of work and the action of directorate inspectorates and individual inspectors	N	MoEPPP	ST/ LT

Legend:

Responsible organisation
SWD - State Water Directorate, MoEPPP – Ministry of Environmental Protection and Physical Planning, MHS - Meteorological and Hydrological Service, MMATC - Ministry of Maritime Affairs, Transport and Communications
Level
(N) National, (R) Regional, (L) Local
Term (time necessary to implement measures and activities)
PR – Priority, ST - Short-term (0-2 years), MT - Mid-term (2-5 years), LT - Long-term (more than 5 years)

Water Inspectorate

The State Water Directorate, including the Inspectorate for Water Protection, is part of the government administration but lacks a minister, and therefore does not participate in government activities. However, it has obligations similar to those of governmental water authorities.

The National Water Inspectorate at the State Water Directorate performs inspection duties and tasks laid down in the Law on Waters (*Narodne novine* No. 107/1995) and the Law on Water Management Financing (*Narodne novine* No. 107/1995). The National Water Inspectorate supervises the work of county water inspectorates, determines guidelines for their activities and undertakes various other measures to improve their work organisation.

County water inspectorates supervise the implementation of laws and regulations, and implementation of water management measures. Water inspectors, pursuant to Article 45 of the Law on Water Management Financing, oversee the implementation of laws and regulations and calculate water management charges and water protection charges. Stronger efforts are needed to organise county water inspectorates to provide for more integrated control at the county level.

There is also the Croatian Water Management Enterprise, which has equipment for water monitoring. The Water Management Enterprise is obliged to provide data to the State Water Directorate upon the request.

Administrative needs are as follows:

- a basic environmental law;
- specific sectoral laws; and
- standards.

Institutions Connected to EPAs

Environmental protection is divided between different administrative bodies (sectors, directorates) with separate responsibilities, which often prevents an integrated, sustainable approach to environment protection. This pertains primarily to water related problems

(which have always been overseen by an autonomous administrative unit), and those connected to nature, the environment, physical planning, soil and forests. The responsibilities for nature and environmental protection were brought up to the MoEPPP level only in 2000. The MoEPPP is in charge of issuing location and building permits, environmental impact assessment (EIA) procedures and waste management problems. (Figure 2 gives an overview of the administrative bodies performing tasks important for environmental protection.)

Some of the responsibilities have been transferred to county offices at the regional level, while others have been transferred to municipal governments. According to the Law on Waste, local government is responsible for municipal waste management (organisation, collection, disposal and financing) while counties are responsible for industrial waste disposal. The management of hazardous waste has been raised to the state level. Municipalities are also responsible for wastewater treatment, though financial burdens are borne partly by the state. After an EIA has been elaborated, location permits (for waste and for water) and building permits will be issued at the state level via county offices. Locations must be marked in physical plans.

The MoEPPP works closely with other ministries and institutions, according to their competences and priorities. Experts from other ministries draw up written positions on different activities that are likely to affect the environment, and take part in working groups concerning these kinds of activities or projects.

As mentioned earlier, environmental county offices are open in seven towns. They are very important because they collect data from polluters, and also participate in issuing permits.

Needs for cooperation with other institutes are as follows:

- national inspectorates with an integrated approach toward enforcement;
- inspectors covering all aspects of environmental health and protection issues in an integrated manner;

FIGURE: 2

Administrative bodies performing tasks significant for environmental protection, and the scope of their activities

Ministry of Agriculture and Forestry	Agricultural land management, genetically modified food
	Forest protection
Ministry of Health	Protection against noise
	Protection against radioactivity
	Hazardous substances
Ministry of Maritime Affairs, Transport and Communications	Sea protection
Ministry of Education and Sport	Environmental education
Ministry of Defence	Hazardous substances
Ministry of Interior	Fire
	Hazardous substances
Ministry of Economy	Waste import
	Ozone Depleting Substances (import/export)
Ministry of Justice and Public Administration	Penal code
Ministry of Science and Technology	Scientific research
	Scientific projects and environment protection
	Higher education
State Water Directorate	Water management
State Institute for Standardisation and Metrology	Standards
Institute for Toxicology	Hazardous substances
Hydrological and Meteorological Service of Croatia	Climate

- national and regional coordination bodies for addressing environmental crime;
- national investigation bodies for environmental crime; and
- a national institute for environmental research to provide service inspectorates.

Permitting System and Connection to the EPA

The permitting system covers the following:

- location permits, which allow developers to build on a certain site (related to zoning);
- EIAs that are conducted when issuing location permits and other special permits related to water, forest, nature, etc; and
- building permits.

Croatia has a long track record of conducting EIAs. The first code was passed in 1984. Since then, EIA legislation has been constantly fine-tuned in order to:

- improve the procedure;
- bring it into line with the best world practices, and
- assume relevant rights and duties within the international community.

EIAs are prescribed by Articles 25-32 of the Law on Environment Protection (NN 82/1994). The procedure is defined by the Regulations on Environmental Impact Assessment (NN 27/2000). The procedure must envisage possible detrimental impacts of planned projects on the environment, and recommend adequate environmental protection measures.

By regulation, an EIA should be carried out before the issuance of a location permit. It is recommended that it be carried out as early as possible — ideally-however, before project plans are finalised, before site selection and before settling on significant technologies that will be used on the site. EIA results should be available during the elaboration of strategies, programmes or plans in economic, physical or transportation-related development. The EIA should always be consulted before plan acceptance — not after — but that is not always the case. Croatia is now planning to introduce strategic environmental assessments (SEA) for certain projects, which is in compliance with the EU Directive on Assessing the Environmental Impact of Certain Plans and Programmes. (Figure 3 shows a simplified flowchart of the EIA procedure.)

If the EIA Commission finds that a project has significant shortcomings which cannot be corrected, the body will recommend a rejection of the project. If the EIA Commission finds a shortcoming that can be corrected, they will request that the developer:

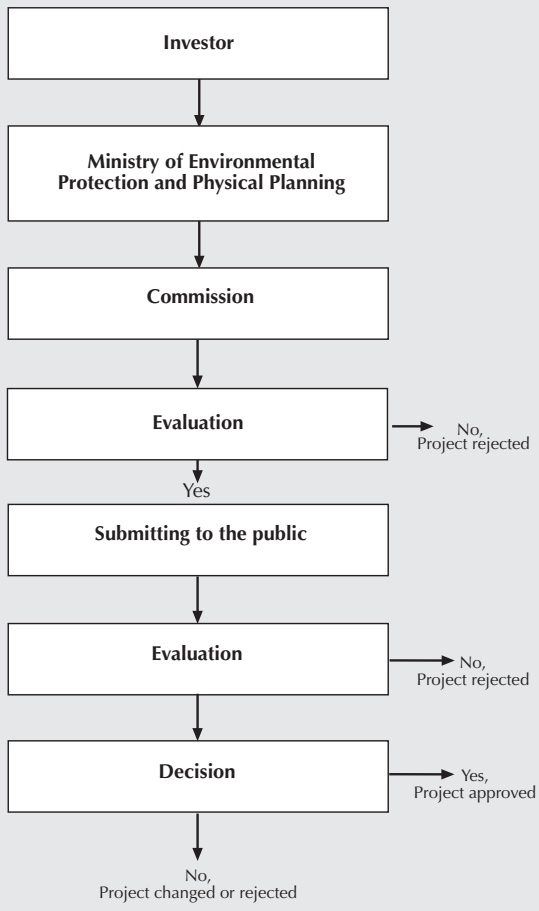
- change the project;
- seek further expert advise; and/or
- obtain professional support from someone who helped prepare the project.

If the investor does not comply with the request, the EIA Commission will reject the project.

The permitting system in Croatia covers the sectors of water quality and management, nature protection, waste management, hazardous substances and resource management.

FIGURE 3

Flowchart of the EIA Procedure



Water

The State Water Directorate issues permits for:

- the use of publicly-owned water resources;
- gravel excavations;
- location of developments; and
- EIAs for construction activities.

Waste

The MoEPPP issues permits for:

- collection and processing of hazardous waste,
- waste import and export; and
- EIAs for construction activities.

Environmental county offices issue permits for collecting and processing municipal and non-hazardous industrial waste.

Permitting needs are as follows:

- improving advisory capacity;
- better follow-through with permit applications; and
- increased personnel to check permits.

Environmental Control

Environmental legislation in Croatia provides for specific regulatory, administrative, and investment measures suited to each part of the environment, including water, air, waste, industrial pollution prevention, and risk management. Furthermore, there are a number of measures that address integrated pollution prevention and control.

The inspectorates are in charge of enforcing all these regulations. When other government authorities launch new regulations in which the inspectorates have an interest, the MoEPPP will tender an opinion. Needs in compliance checking are as follows:

- compliance in checking planning procedures;
- communication skills for cooperation with other authorities;
- compliance promotion strategies;
- code of conduct for compliance checking;
- non-compliance response strategy; and
- condoning strategy.

Enforcement Procedures

Inspectorates can prosecute when environmental regulations are violated. The consequences may be a fine or suspension of a work permit. After a court of first instance renders an opinion, developers may appeal to a court of second instance.

It is also possible to involve the public in permitting procedures, as spelled out in the Regulation on Environmental Impact Assessments.

An essential condition for efficient implementation of an environmental strategy is firm institutional organisation based on stable human resources and a solid communications system (O1, Figure 6 on page 117). For this reason, the MoEPPP should set up a strategy implementation unit as a focal point for operations and coordination. Its tasks should include preparation of draft reports for all stakeholders (including the government) and to organise a network to develop local, regional and specialised programmes.

Within environmental strategy implementation, particular attention should be paid to capacity building of local governments and self-governments. This includes increasing the number of employees, and training them in both administrative and specialised tasks. This is especially important now, due to plans to decentralise authority and transfer environmental responsibilities to the local level.

To achieve cross-sectoral coordination, a sustainable development council should be set up, involving NGOs and ministers and representatives of ministries in the environmental field. The Technical Environmental Council, which is to be set up on the ministry level, should take on an advisory role. One of the primary tasks to be undertaken by the Sustainable Development Council and the Technical Environmental Council should be environmental strategy implementation and improvement.

An integrated environmental protection information system should ensure the collection and public dissemination of all important data[7] There should be well-prepared communication between all partners.

During the preparation of each biannual environmental status report[8] the environmental strategy should be regularly amended in accordance with proposals sent by the Sustainable Development Council and Technical Environmental Council to the MoEPPP.

All stakeholders must take part in the preparation of this report on an equal footing. To achieve this objective, there must be free access to information for all stakeholders, and regular communication and collaboration between regional, local and sectoral authorities and NGOs.

In addition, there must be improvements in the way regulations are prepared. This means there must be more time for consultation — particularly for those who will be responsible for improvements on the national,

regional local and sectoral levels. Lawmakers should aim at drafting legislation that can be implemented — which means they should develop parallel operational programmes to apply the laws. Also, they must ensure that there is the necessary institutional capability, money and manpower to implement the laws and investigate the financial effects of each regulation on all actors.

Executing an environmental strategy involves continuous monitoring and analysis of effects on environmental quality and overall social development. Strategy execution must be based on:

- environmental monitoring on the basis of fixed indicators;
- inspection organisation, and improvements to human and technical resources; and
- raising stakeholders' awareness of the need for shared environmental responsibilities.

The needs of executive powers are as follows:

- continuous technical training in enforcement practices in chemicals, waste management, major-accident prevention, integrated pollution prevention and control, and nature protection;
- legal training;
- human resources management; and
- planning.

Environmental Inspectorate Human Resources

In 2001 there were a total number of 34 human resources staffmembers within the Regional Environmental Inspectorate. The breakdown by location is as follows: Zagreb (3), Split (4), Rijeka (6), Osijek (3), Varazdin (3), Zadar (3), Pozega (3) and REI Headquarters (9). The MoEPPP has 12 employees in its Department of Nature Protection Inspection.

Environmental Inspection in Practice

Figure 4 provides data on checks carried out by the regional county offices in 2001.

On average, inspectors of the MoEPPP and county offices participate annually in the clean-up of 41 accident sites; make 2,960 site inspections; write 419 warnings against polluters; and impose 369 sanctions, 161 fines and 240 court cases.

The amount of fines collected in the year 2001 was EUR 160,000.

Needs in performance indicators are as follows:

- development of indicators;
- Legal training — especially with regard to new laws;
- training in site visits — particularly for procedural requirements in new legislation (integrated permits, compliance checking etc);
- development of investigative skills etc;
- continuous professional training for inspectors;
- access to databases; and
- computers and vehicles.

Data Storage and Retrieval Systems

Environmental Protection Information System

The Environmental Protection Information System (EPIS), based on corresponding monitoring and socio-economic data, is necessary to achieve the objectives of the environmental management system. It provides conditions for quicker, better and easier data management, thus facilitating high-grade implementation of environmental protection policy and better public access to information.

Just like numerous other countries, especially those in transition, Croatia suffers from:

- a lack of basic data on the state of the environment;
- a shortage of information about existing data; and
- a shortage of adequate statistical data and especially that which would show the interconnections between development activities and the state of environment, (so-called 'indicators' that provide a foundation for the process of political decision-making).

For that reason the establishment of a high-quality information system is considered one of the most important instruments for implementation of environmental protection policy.

By assuming some of the international obligations aimed at the protection of the biosphere, Croatia has committed itself to submitting data to international institutions, and to keeping its public well informed. This particularly applies to obligations arising from activities related to the European Environmental Agency, the expected obligation to establish a global information system on the state of the environment called EIONET (European Environment Information and Observation Network), and to activities resulting from various con-

ventions — especially in connection with the provision of public access to information on the basis of the Aarhus Convention.

Activities on the establishment of the EPIS date back to 1991, when the formulation of plans for the Croatian Environmental Protection Information System (CEIS) was initiated. The principles proposed by this programme were subsequently adopted as a foundation for the establishment of an integrated environmental protection system in Croatia. At that time, work also commenced to create "thematic centres" to hold basic databases. Many public and scientific institutions, institutes, bureaus, individual businesses – all potential thematic centres – have data that might be used for environmental protection . These centres are also seen as an expansion of current data processing systems (the National Bureau of Statistics, the National Weather Bureau, and the National Hydrological Institute).

Significant results were achieved by the Croatian Public Water Management Company, where a GIS centre was established. INA Naftaplin also laid the foundations for such a centre. The Croatian Forests Authority has been slowly creating a GIS centre, and has already accumulated a significant database. The Geological Research Institute has trained a group of experts that has built up another ecology database. The Hazardous Waste Management Agency (APO) introduced a GIS database on waste-disposal sites, and the Croatian Power Board (HEP) is another active stakeholder. Telecommunications companies have set a sterling example of using the GIS to make technical and operational decisions on spatial systems.[9] Unfortunately, there is no systematic monitoring of soil, and no integrated monitoring of air quality. The data that has been collected is not connected by an adequate system.

The Environmental Emission Cadastre (EEC), although properly conceived, ended in failure due to lack of a proper information system and basic environmental philosophy. Consequently, data was often collected without being properly processed and, therefore, could not be used in the creation of environmental policy. After substantial corrections, the EEC eventually became an important part of the integrated information system.

The 1994 Law on Environmental Protection laid down the obligations of the government body responsible for environmental protection to establish an information system in collaboration with ministries and other governmental bodies. The EPIS should be managed by a central government authority, but consist of a number of widespread, independently formulated, interconnected information systems with their own special features.

The obligations of institutions that should participate in the development of this system were laid down in the By-Law on the Environmental Protection Information System (*Official Gazette* No. 74/1999). This legislation prescribes the methodological basis of the environmental protection information system, and the obligations and procedures of environmental data transmission and management. The participants and their obligations in special fields are to be determined by the Information System Management Programme, which has yet to be elaborated.

The 10 EPIS components are: air, soil, water, sea, biological and landscape diversity, climate, cultural heritage, spatial features, waste, and other data relevant to environmental protection. Unfortunately, the link between environmental data and socio-economic development through indicators is missing. Each of these parts is a complex information system in its own right and has thematic sub-fields.

There are also ongoing activities of collection and exchange of data pursuant to international treaties, programmes and projects (e.g. Mediterranean Action Plan, Action Plan for the Protection of the Danube Basin, Corinair, Infoterra, etc).

Links between the environmental protection information system and other information systems is envisioned in Figure 5.

Identification of problems and priorities

No part of the EPIS has yet been established. The reasons for such a slow start are the following:

- insufficient institutional strength of the government body responsible for environmental protection;
- non-recognition of the need for high-quality data in the decision-making process;
- incomplete legal framework elaborating the information system (environmental protection strategy, implementing regulations determining the data required, underdevelopment of environmental indicators);
- lack of a programme for systematic monitoring of the state of environment, including a programme for managing of the EPIS;
- the high complexity of the system due to a great number of institutions involved in the EPIS, which leads to problems in coordinating inter-sectoral activities, the existence of conflicting data, difficulty in establishing a single system, and high costs of building an information system;
- problems of the availability of data (shortage of capacities for data collection, processing, storage, exchange and use);

FIGURE 4

Operative control carried out by county offices in 2001

Regional Environmental Inspectorate	Number of inspected sites	Number of reports drawn up against polluters	Number of court cases won	Number of fines
Zagreb	9	262	7	22
Split	20	250	17	23
Rijeka	18	615	9	70
Osijek	13	364	4	12
Varazdin	75	258	64	96
Zadar	8	188	3	36

- insufficient involvement in international programmes, projects; and
- insufficient education and development of scientific and research work.

Objectives and measures

Objectives (see Figure 6)

The basic objective is the establishment of a high-quality information system as the most important instrument for implementing of environmental protection policy (O1).

The EPIS should make it possible to obtain information needed for making decisions on environmental protection on the principles of sustainable development at local, regional, national, international and global levels. It should also support the process of the Republic of Croatia's joining the EU (O2).

The EPIS should also enable the introduction of regular information on the state of the environment based on comprehensive monitoring (O3) and facilitate the accessibility of information to the public (O4).

In terms of time an integrated system cannot be created at once, but only if it is harmonised with the scope of activities, human resources and funds available for that purpose. The establishment of the EPIS should start with a pilot installation (O5) for one priority task[10].

Measures (see Figure 6)

In establishing the EPIS it is necessary to respect the existing potential of thematic centres and to support their work in synthesised data acquisition. The first step is to create the "metabase" of available data and later to set conditions under which access to such bases could be provided, or whether they can be bought (M1).

The environmental protection information system consists two parts:

- geographically referenced databases; and
- data links related to the environment (monitoring) and utilisation of natural resources the so-called "indicators[11]" or socio-economic development.

Therefore it will be necessary to redefine the content of the existing EPIS (M2).

The information indispensable for environmental protection is scattered among:

- state institutions;
- individual institutes and bureaus;
- universities;
- economic entities (industry, agriculture, forestry, maritime organisations, transportation enterprises, hospitals, tourism businesses, etc); and
- companies specialising in GIS and remote research.

An enormous volume of data is already available, but there is no additional funding for the majority of repositories. It is, however, necessary to establish a spe-

cial-purpose structure where this data would be collected in a purposeful manner (M3).

Part of the valuable information structure may be found in the State Bureau of Statistics. For the field of environment, very little data is processed indirectly[12]. The State Bureau of Statistics is in the process of harmonising Croatia's statistics with those of the EU. More than 300 statistical surveys are performed yearly. The Programme of Statistical Surveys of the Republic of Croatia from 2002 to 2006, now in the preparatory phase, will be based on the statistical requirements compendium of EUROSTAT (the statistical bureau of the European Union).

The MoEPPP will have to stipulate what kind of data is suitable for collection and processing by the State Bureau of Statistics (M4).

The EPIS is to be organised in such a manner that it serves numerous users, such as administrative bodies, businesses, the public, international organisations. The entire system may function in the same way as national, county or municipal statistical offices. The information systems could likewise cooperate at similar levels, using information sources close to the origin of data (M5). This way it would be easier to secure necessary local finances from business and industry.

The establishment of this organisation (e.g. then Office for the Management of Sources of Information Required for Nature and Environment Protection within the planned Environmental Protection Agency) should start with an initiative of the government body responsible for the protection of nature and the environment. This organisation should be made independent from the administrative body (M6).

This organisation should have all the technology necessary to manage the information segment of the national GIS programme for the protection of nature and the environment. This office or agency should be funded on a wider scale (partly by the state) with necessary funds secured from the private sector, and partly from international sources. Its tasks should be as follows:

- establishling connections to basic data providers,[13]
- creating synthesised information;
- organising data management, and
- coordinating and disseminating data to users, local governments and specific international bodies.

The future information system should be linked to other systems worldwide, and especially to the European Environment Agency, in line with obligations arising from EU (M7) membership.

Satellite photography is an important source of terrestrial data. While these possibilities have been discussed only theoretically, some Croatian companies are already providing interpretations of satellite photos of various origins. Domestic aerial photos are used, as well. The use of aerial and satellite photography could greatly influence the decision-making process (M8).

Management of the EPIS requires an educated staff. Although Croatia's universities are not able to provide sufficient and necessary knowledge, a great number of young people have gained qualifications in recent years by additional training. It is necessary to encourage colleges, secondary professional schools and regular schools to provide the possibilities of acquiring new knowledge needed for the application of new technologies (M9).

Needs in data storage and retrieval are as follows:

- software for databases;
- training in use of databases;
- computer hardware; and
- industrial activities inventory.

Environmental Monitoring System

As mentioned earlier, Croatia does not have an environmental agency, but one will be established in 2002 or in the beginning of 2003. The agency will be responsible for environmental monitoring and will use data collected by other institutions.

Croatia has also made preparations for ratification of the Aarhus Convention, with the help of the Danish Environmental Protection Agency.

Consulting and technical support (IT equipment, software, and professional literature) are high-priority monitoring needs.

Compliance Assessment

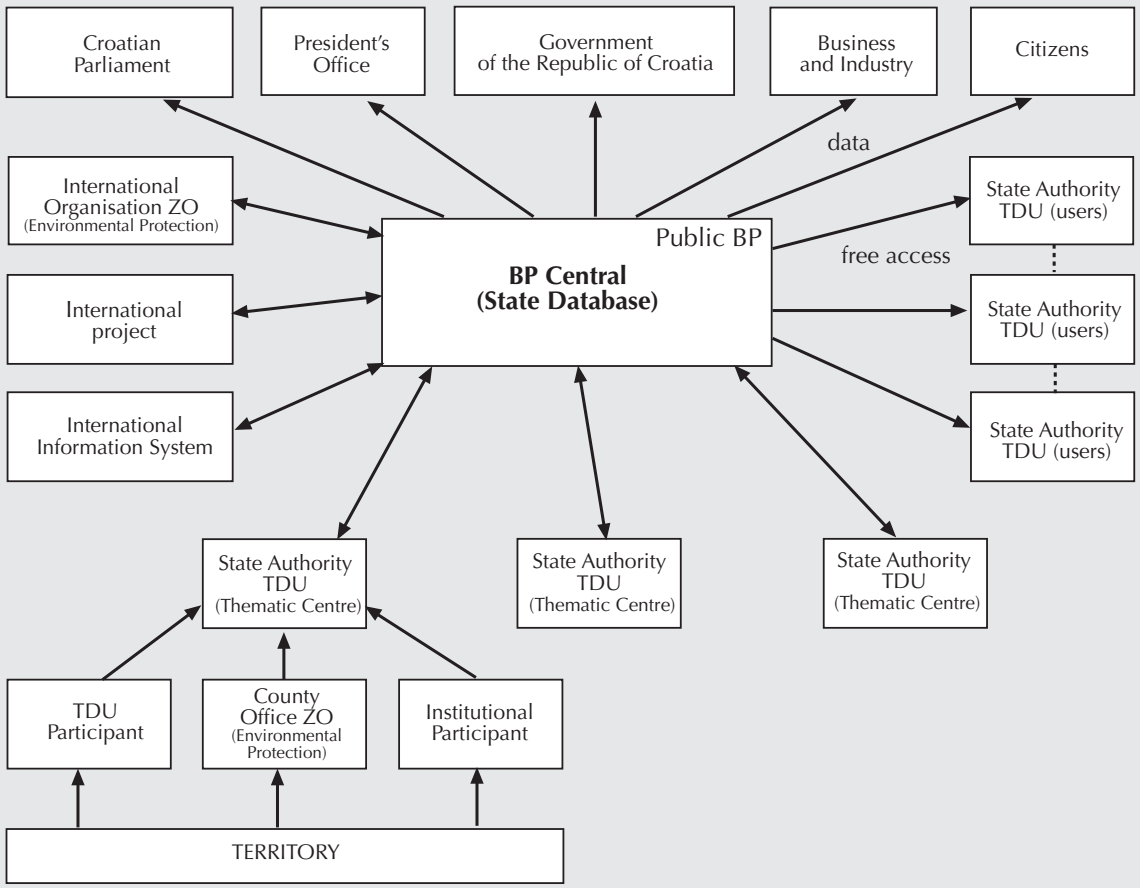
Compliance assessment is carried out in two ways:

- All companies have an obligation to provide information about their environmental pollution to county offices. County offices collect this data, and send the data to the land office, which is at the MoEPPP.
- Inspectorates have data about all polluters. Inspectors announce the first visit to a company, and provide the company with a registration form for the land office. The inspectors inform the company about its obligations and, after the first visit, the company is entered into the registry. Inspectors also make ad hoc inspections based on complaints, or to investigate the accuracy of received data.

Because of the small number of inspectors, it is impossible to visit all polluters. For the same reason, filing at the land office moves very slowly. Just a few firms send environmental data to the land office on a regular basis — mostly because they are ignorant of the procedure.

FIGURE 5

The information flow between various groupings within the EPIS



Only laboratories licensed by the MoEPPP can carry out monitoring and sample analyses of pollution control.

The procedure for assessing environmental compliance is complaint-driven, and the MoEPP's enforcement bodies (the regional offices) carry out the inspections.

Needs in compliance assessment are as follows:

- development and implementation of strategy on compliance assessment on the basis of compliance indicators;
- more inspectors; and
- more vehicles.

Enforcement Performances and Reporting Capabilities

The major indicators for assessing the "demonstration value" of specific enforcement activities are as follows:

- percentage of average number of penalty statements drawn per year (421);
- fines imposed against polluters per year (161);
- the amount of fines collected per year (EUR 160,000 in 2000); and
- the number of court cases won per year (240).

FIGURE 6

Environmental Protection Information System (EPIS)

Objective		Measures to achieve objectives	Activity level	Responsible organisation	Time limit (year)
O1	M1	Create a "metabase" of available data and define conditions for accessing or buying it.	N	MoEPPP	ST
O1	M2	Redefine the content of the present EPIS by introducing indicators that best reflect environmental policy.	N	MoEPPP ME	ST
O1	M3	Establish a special-purpose structure for collecting the existing data in state institutions, individual institutes and bureaus, universities, business and industry, and companies specialised in GIS and remote research.	NRL	MoEPPP	MT
O1	M4	Propose what type of data is suitable to be collected and processed by the National Bureau of Statistics.	N	MoEPPP	ST
O1	M5	The EPIS should function as a work-and--production entity at state, county and municipal levels.	NRL	MoEPPP Competent bodies	ST
O1	M6	Establish an office that can operate within the future environmental agency for the management of sources of information required for nature and environment protection.	N	RC	ST/MT
O2	M7	Organise a Croatian centre, define the Croatian compnent of the EIONET system and establish contact with the European Environment Agency.	N	MoEPPP	MT
O3	M8	Improve system of coordination and the quality of monitoring carried out by various agencies. (Priority: preparation of an assessment of needs and monitoring, including training.)	N	MoEPPP	ST
O3	M9	Encourage the use of data received by aerial and satellite photography to support the decision-making process.	NRL	MoEPPP CG LG	LT
O3	M10	Encourage colleges and other institutes of higher learning to provide training in new (information) technologies.	N	MoEPPP MES MS	LT
O4	M11	Establish a database and provide information to all persons interested, including targeted public information, and encourage participation in the decision-making process.	NRL	MoEPPP NGO	MT
O5	M12	Provide conditions for establishing a pilot installation for a priority task.	N	MoEPPP	ST

Legend:

Responsible organisation: LG - Local government (city, municipality); MoEPPP - Ministry of Environmental Protection and Physical Planning; ME - Ministry of Economy; MS - Ministry of Science; MES - Ministry of Education and Sports; RC - Government of the Republic of Croatia; CG - County government; NGO - Non-governmental organisations

Activity level: N - National; NRL - National-regional-local

Time limit (time required to implement measures and activities):
ST - Short-term (0-2 years); MT - Medium-term (2-5 years); LT - Long-term (more than 5 years)

- In general, the improvement in the state of the environment is not linked to enforcement responses while reported. Annual reports are the only accurate reflections of the state of the environment, and they should be indicator-based and organised according to the "Driving forces-Pressures-State-Impact-Responses" (DPSIR) scheme.

Needs in enforcement indicators and reporting capabilities are as follows:

- indicator-based reporting;
- annual report writing; and
- credibility-testing "peer" reviews.

ENDNOTES

1 This includes almost all sectors, the most important being physical planning, economy (industry, agriculture, energy, transport, tourism, etc.) science, education, market and prices, fiscal policy, jurisdiction, housing, etc.

2 After the 1992 Rio Conference, most of the world countries (and almost all developed countries) established the bodies on the highest level for harmonisation of development policy with sustainable development principles.

3 The UN Environmental Performance Review on Croatia (UN ECE 1999) was carried out when environmental protection was still a responsibility of the State Directorate. It proposes that environmental authorities in the field of environmental protection be integrated within a single ministry which should cover the environment, physical planning, tourism, water resources protection against contamination, hunting and protection of fisheries and forest. The establishment of the new ministry has to some extent made environmental protection more of a priority.

4 Each county has at least one to two persons in charge. The situation in the cities is perhaps somewhat better, even though municipalities generally have no environmental officials.

5 The quality of personnel is a general state administration problem, and particularly in the field of environmental protection since this sector has no tradition in administration or staff education

6 According to the previous structure, the inspection services existed in relevant county offices, the Office of the City of Zagreb in charge of building affairs, and the Ministry, while now the inspection control, except for the town-planning inspectorate, has been established in the central service in the Ministry and in seven branch offices of the Ministry, i.e., Zagreb, Rijeka, Zadar, Split, Varazdin, Pozega, and Osijek.

7 This system should ensure implementation of the principle of free public access to information.

8 Pursuant to Article 22 of the Environmental Act, the Report should be prepared for the Croatian Parliament on biannual basis. However, the Parliament decided that the Report be approved every four years.

9 Various institutions such as scientific institutions, especially at the seaside, have collected substantial data on the state of the environment.

10 A pilot project should facilitate the following: (a) Collection of data on the state of the environment related to agreed-upon priority tasks; (b) Co-ordination of the work of experts – data providers (thematic centres); (c) Establishment of coherent nomenclature, terminology and definitions so as to ensure the comparability of data; (d) The linking of data on the state of environment with socio-economic indicators and the establishment of a system of indicators.

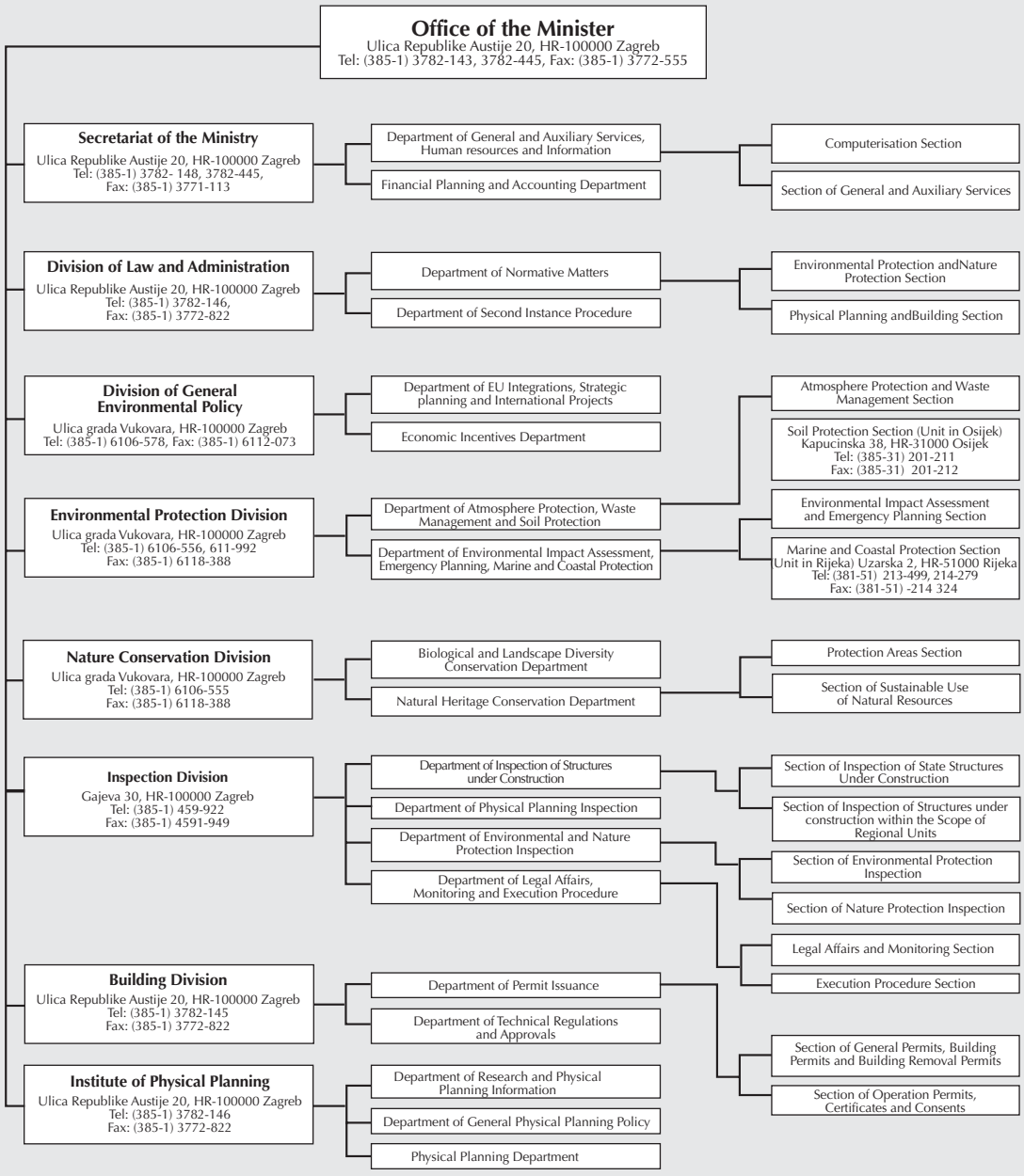
11 Indicators are synthesized data linking the state of the environment, or rather the consumption of natural resources, with socio-economic development; e.g. the amount of energy required to increase a part of the GNP or the use of public transport in relation to each individual's quality of life. There are various proposals for the establishment of indicators. One of the more appropriate proposals is entitled "Indicators of Sustainable Development Framework and Methodologies" (UN, 1996).

12 Data on water and waste management, utility infrastructure and environmental protection investments are collected by the State Bureau of Statistics. The data are collected by individual bodies such as the State Water Directorate for waters and MoEPPP for refuse and accidents.

13 It is possible to foresee three information organisational levels: (1) EPIS as a national co-ordination centre with its regional components and links to international organisations: (2) Thematic centres as collectors of data on a particular part of the environment, such as air or soil, but also in co-operation with the national centre; (3) Data sources, i.e. all of the numerous places in which measuring and observations are carried out and forwarded to higher levels. This includes businesses that have their own special data.

Annex 1: **Structure of the Ministry of Environmental Protection and Physical Planning**

FIGURE 8



Annex 2: **Review of Regulations in the Field of the Protection and the Environment in Croatia**

Law on Environmental Protection

I. General provisions
II. Basic environmental protection principles
III. Environmental protection documents
IV. Implementation of environmental protection
V. Liability for environmental pollution
VI. Financing environmental protection
VII. Control
VIII. Penalty clauses
IX. Transitional and final provisions

By-Law on environmental impact Assessment

I. General Provisions
II. Projects requiring EIAs
III. Contents of the EIA study
IV. Commission for environmental impact assessment
V. Public participation
VI. List of projects

By-Law on an Environmental Information system

I. General provisions
II. Data management
III. Final provisions

Law on Nature Protection

I General provisions
II. Protected areas
III. Control
V. Penalty clauses
VI. Transitional and final provisions

ANNEX 3: **Ministry of Environmental Protection and Physical Planning**

1. Office of the Minister

Ulica Republike Austrije 20, HR – 10000 Zagreb
Tel: (385-1) 378-2143, 378-2487;
Fax: (385-1) 377-2555;
E-mail: kabinet@mzopu.hr
Minister of State: Bozo Kovacevic
Minister Deputy: Roland Zuvanic
Secretary: Mirna Vlasic

2. Secretariat of the Ministry

Ulica Republike Austrije 20, 10000 Zagreb
Tel: (385-1) 378-2148,
Fax. (385-1) 388-2822;
E-mail: tajnistvo@mzopu.hr
Secretary: Ljiljana Radic-Kisevic

2.1. Department of General and Auxiliary Services,
Human Resources and Information

2.1.1. Computerisation Section

2.1.2. Section of General and Auxiliary Services (Koraljka Marusic, Tel: (385-1) 378-2149)

2.2. Financial Planning and Accounting Department

3.Division of Law and Administration

Ulica Republike Austrije 20, 10000 Zagreb
Tel: (385-1) 378-2146; Fax. (385-1) 377-2822
Assistant to Mminister: Gordana Valcic

3.1. Department of Normative Matters (Josip Bienenfeld,
Tel: (385-1) 378-2468)

3.1.1 Environmental Protection and Nature Protection Section (Vinko Mladineo,
Tel: (385-1) 378-2470)

3.1.2. Physical Planning and Building Section (Ana Cerovski, Tel: (385-1) 378-2488)

3.2. Department of Second Instance Procedure (Ksanta Vojvodic, Tel: (385-1) 378-2456)

4. Division of General Environmental Policy

Ulica grada Vukovara 78, 10000 Zagreb
Tel: (385-1) 610-6578, Fax. (385-1) 611-2073;
E-mail: opca_politika@mzopu.hr
Assistant to Minister: Roko Andricevic

4.1. Department of EU Integrations, Strategic Planing and International Projects (Kornelija Pintaric,
E-mail: kornelija.pintaric@mzopu.hr)

4.2. Economic Incetives Department (Mirjana Papafava,
E-mail: mirjana.papafava@mzopu.hr)

5. Environmental Protection Division

Ulica grada Vukovara 78, 10000 Zagreb
Tel: (385-1) 610-6556, Fax: (385-1) 611-8388;
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Assistant to Minister: Andjelka Bedrica

5.1. Department of Atmosphere Protection Waste Management and Soil Protection (Jasenka Necak, E-mail: jasenka.necak@mzopu.hr)

5.1.1. Atmosphere Protection and Waste Management Section

5.1.2. Soil protection Section
(Unit in Osijek, Predrag Sibalic)
E-mail: zastita_okolisa_os@mzopu.hr; predrag., sibalic@mzopu.hr

5.2. Department of Environmental Impact Assesment, Emergency Planning, Marine and Coastal Protection (Nenad Mikulic,
E-mail: nenad.mikulic@duzo.tel.hr)

5.2.1. Environmental Impact Assessment and Emergency Planning Section (Hrvoje Buljan, E-mail: hrvoje.buljan@mzopu.hr)

5.2.2. Marine and Coastal Protection Section (Unit in Rijeka, Margita Mastrovic, E-mail: andrija.randic@mzopu.hr)

6. Nature Conservation Division

Ulica grada Vukovara 78, 10000 Zagreb
Tel: (385-1) 610-6555, Fax. (385-1) 611-8388;
E-mail: zastita_prirode@mzopu.hr
Assistant to Minister: Ivan Martinic

6.1 Biological and Landscape Diversity Conservation Department (Jasminka Radovic, E-mail: jasminka.radovic@duzo.tel.hr)

6.2. Natural Heritage Conservation Department (Radenko Dezelic, Tel: (385-1) 610-6581)

6.2.1. Protected Area Section (Eugen Draganovic, E-mail: eugen.draganovic@duzo.tel.hr)

6.2.2. Section of Sustainable Use of Natural Resources (Stella Satalic, E-mail: stela.dolenec@duzo.tel.hr)

7. Inspection Division

Gajeva 30, 10000 Zagreb
Tel: (385-1) 459-1922; Fax. (385-1) 459-1949;
E-mail: ured.inspekcije@mzopu.hr
Assistant to Minister: Sladana Miocic

7.1 Department of Inspection of Structures under Construction (Chief inspector: Zeljko Korica Tel: (385-1) 459-1931)

7.1.1. Department of Inspection of Structures under Construction (Damir Borovic, E-mail: damir.borovic@mzopu.hr)

7.1.2. Department of Inspection of Structures under Construction within the Scope of Regional Units

7.2 Department of Physical Planning Inspection (Ivan Kovacic, Tel: (385-1) 459-1944)

7.3. Department of Environmental and Nature Protection Inspection (Anita Patekar-Pokrovac – chief inspector, Tel: (385-1) 459-1922; Ante Belamaric, E-mail: ante.belamaric@mzopu.hr)

7.3.1 Section of Environmental Protection Inspection (Branka Stunkovic, Tel: (385-1) 459-1924)

7.3.2. Section of Nature Protection Inspection (Katica Bezuh, E-mail: katica.bezuh@mzopu.hr)

7.4. Department of Legal Affairs, Monitori ng and Execution Procedure (Zeljko Horvat, E-mail: zeljko.horvat@mzopu.hr)

7.4.1. Legal Affairs and Monitoring Section (Miljenka Lovrencic)

7.4.2. Execution Procedure Section (Mladen Ceic, E-mail: mladen.celic@mzopu.hr)

8. Building Division

Ulica Republike Austrije 20, 10000 Zagreb
Tel: (385-1) 1 3782-145; Fax. (385-1) 377-2822;
E-mail: graditeljstvo@mzopu.hr
Assistant to minister: Lino Fucic

8.1. Department of Permit Issuance (Vesna Veselin, Tel: (385-1) 378-2467)

8.1.1. Section of General Permits, Building Permits and Building Removal Permits (Ljubica Cusak, Tel: (385-1) 378-2421)

8.1.2. Section of Operation Permits, Certificates and Consents (Nada Mardetko-Skoro, E-mail: nada.mardjetko.skoro@mzopu.hr)

8.2. Department of Technical Regulations and Approvals

9. Institute of Physical Planning

Ulica Republike Austrije 20, 10000 Zagreb
Tel: (385-1) 378-2146; Fax. (385-1) 377-2822;
E-mail: zavod@mzopu.hr
Director General: Zlatko Uzelac

9.1 Department of Research and Physical Planning Information (Ratko Zimmerman, E-mail: ratimir.zimmerman@mpugis.zpp.tel.hr)

9.2 Department of General Physical Planning Policy (Antun Paunovic, E-mail: antun.paunovic@mpugis.zpp.tel.hr)

9.3. Physical Planning Department (Vlatka Durkovic, Tel: (385-1) 378-2473)

Annex 4: **Inspection Report for 2000**

Supervision of Environmental Inspection (2000)

Previous inspection activities were concentrated on consolidation of the service, and new work conditions resulted from establishing the Ministry of Environmental Protection and Physical Planning.

The Environmental Inspectorate made 2,366 inspections and 1,084 inspections through official letters (official letter, official opinions, etc). The inspectorate has also given 418 demands for various law infringements: most of them concerned the Law on Waste (17.1%), the Law on Air Quality Protection (47.1 %), and the By-Law on Limit Values of Pollutant Emissions from Stationary Sources into the Air (57.1). Unfortunately, the Environmental Inspectorate has not obtained information about carrying out punishments.

Some facts concerning the environmental regulation:

Environmental Protection Law

- Significant improvement would be achieved if the water regulation issue would be transferred to environmental regulation. This law does not sanction transgressors.
- If the EIA proves unnecessary, the zoning plan must include environmental measures. As the zoning plan has not yet been launched, location and building permits are not providing the environmental measures.
- It is very important to revise a decree of the law on the inspection supervision that determines the competence boundaries for county offices and central services.

Waste Regulations

- In most county offices community supervision, community order and waste collection are not organised. Therefore it is very important to establish proper rules concerning the persons in county offices responsible for this issue.
- All but the most critically effected landfills should be kept open. The others should be given longer time to be solved or closed.
- The time-frames for making EIAs and for building are too narrow.
- The main problems are to ensure funds and location. The counties have not built the landfill and the state also has not built a landfill for hazardous waste.
- It is necessary to revise the list of certified laboratories because some of them are not properly equipped.
- The rulebook on waste container management has yet to be launched.

Air Protection

It is necessary to determine competence between Environmental Inspection and Sanitary Inspection.

The problems within Environmental Inspection are as follows:

- lack of inspectors;
- prescription – not all decrees are sanctioned;
- prescription of the Environmental Intervention Plan does not explain the position of inspectors in the cases of environmental accident, the companies that should intervene in the case of accident are not certain; if the perpetrator is unknown, the amount of money for covering services are not determined;
- too much time in solving inspection requests in court;
- lack of computers and cars; and
- difficulty in preparing an emergency plan for of environmental accidents, because inspectors have no mobile phones and/or cars.

Country Profile: **FYR Macedonia**

Prepared by
Gordan Stankovic

February 2002

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Country Profile: **FYR Macedonia**

Administration

All ministries and government institutions or administrative organisations are founded in accordance with the regulations on government institutions (Law on Administrative Bodies, *Official Gazette of the Republic of FYR macedonia,* No. 58/2000).

Other government bodies, depending on their function and level of independence, are founded either as independent bodies (head offices, agencies and commissions), or as subordinate sections of ministries (administrations, bureaus, services and inspectorates).

Environmental Protection Agency

The Environmental Protection Agency (EPA) was established as part of the Ministry of Environment and Physical Planning (MoEPP). The EPA was established by the Act on Environment and Nature Protection and Promotion *(Official Gazette of RM* No. 69/1996, No. 13/1999 and No. 41/2000), which came into force in January 1997. The EPA has the status of a service and is not a separate legal entity. This means that the EPA functions as an agency on behalf of the MoEPP, and is separate from the State Environmental Inspectorate (SEI).

The above-mentioned structure is based on Article 5 of the Law on Administrative Bodies (*Official Gazette of RM* No.58/2000), as well as on Article 28, which defines the SEI and EPA as parts of the MoEPP. The EPA carries out expert and other administrative domains, while direct enforcement of the Environmental Act is carried out by the SEI.

According to the Environmental Act, the EPA is responsible for:

- providing expertise and supervision over protected natural treasures, soil, water and air;
- proposing expert and technical solutions for decreasing or preventing pollution and degradation of the environment;
- preparing expert documentation concerning promotion of environmental awareness and protection; and
- measuring and monitoring the status of the environment and tracking changes.

The EPA's work is essentially technical and scientific in nature. The data that it collects may be transferred to the SEI, which is authorised to initiate criminal procedures in the event of legal infractions.

The EPA has four sub-units (Annex 1):

- the Biodiversity Unit;
- the Special Natural Heritage Unit;
- the Monitoring and Environmental Impact Assessment Unit; and
- the Central Environmental Laboratory Unit.

Biodiversity Unit

The Biodiversity Unit's activities and functions are as follows:

- applying the principle of sustainable use of flora and fauna;
- preparing reports and studies to preserve ecosystems and genetic diversity;
- conducting research on valorisation of sites of endemic or archaeological value, and on places inhabited by rare and endangered flora and fauna;
- coordinating projects for reclaiming and revitalising degraded habitats;
- coordinating projects for the reintroduction of rare and endangered wildlife in their natural habitats;
- initiating and proposing amendments to laws relating to the preservation of biodiversity;
- initiating and proposing ratification of international conventions, contracts and protocols on biodiversity;
- coordinating and implementing international multilateral agreements on biodiversity in FYR macedonia; such as the Convention on Biological Diversity, the Convention on the Conservation of European Wildlife and Natural Habitats, etc;
- coordinating and implementing international multilateral agreements, such as Convention on the Conservation of Migratory Species of Wild Animals, and the Convention on International Trade of Endangered Species of Wild Fauna and Flora;

- coordinating compilation of the implementation reports of international multilateral agreements; and
- popularisation and presentation of biodiversity in FYR Macedonia.

Special Natural Heritage Unit

The Special Natural Heritage Unit's activities and functions are as follows:

- monitoring the state of endangered natural treasures, and suggesting measures for their protection and use;
- preparing documentation and providing biological and technical protection for natural treasures;
- maintaining a registry of natural treasures;
- maintaining expert-level documentation of natural treasures (location, level of endangerment, protective measures, etc);
- inspecting the condition of natural treasures;
- ensuring the sustainable use of nature and protected natural treasures;
- defining conditions for protecting natural treasurers in urban planning;
- preparing expert opinions regarding the declaration of resources as natural treasures;
- controlling the use and traffic of wild flora and fauna;
- searching for new natural treasures;
- researching and mapping sites of endemic or archaeological value, and of places inhabited by rare and endangered flora and fauna;
- promoting activities for protection and popularisation of special natural treasures; and
- suggesting regulations for the protection of natural treasure.

Monitoring and the Environmental Impact Assessment Unit

The Environmental Impact Assessment Unit's activities and functions are as follows:

- environmental impact assessment (EIA), including monitoring, coordination and active participation in studies, projects and analyses;
- solid-waste management, including identifying and selecting dumping sites, planning regional systems, reviewing project documentation, cooperating with local authorities, improving waste collection systems, seeing that waste transportation complies with international and national requirements; and monitoring the transport of hazardous waste and sources of hazardous waste;
- monitoring the environment and natural resources by using available data from other authorised institutions in order to make an integrated assessment of the situation according to basic environmental parameters; and
- coordinating and implementing international multilateral environmental agreements.

Central Environmental Laboratory Unit

The Central Environmental Laboratory Unit (CL) measures and monitors the status of the environment, and also monitors the emission of pollutants of various types and origins. The CL has specialised equipment for monitoring and specially qualified personnel. Even though the laboratory is within the organisational structure of the EPA, in practice, it is directly controlled by the SEI.

Since the EPA does not play a role in the direct enforcement of legislation, it may not initiate any criminal proceedings in court, and there are no court precedents connected to the EPA. The EPA informs the SEI about the collected data from the expert supervision as well as the data received from the CL.

Future Environmental Protection Agency

A draft version of the Act on the EPA has been written for this agency. Some of its provisions state:

- the agency will become a separate legal entity and will be independent in its functioning;
- the agency will be set up by the government;
- the agency will be run by a director who will be nominated and supervised directly by the government, and his mandate will be four years; and
- the agency will be managed by a managing board of nine members, also nominated and overseen by the government.

According to the draft act on the EPA, the agency will have the following tasks:

- permitting and regulating activities linked with environmental protection;
- monitoring environmental parameters, developing and managing databases containing environmental information, distributing such information and ensuring public access to same;
- providing support and advisory services to local authorities and other governing bodies relating to the environmental issues in their jurisdictions;

- developing and coordinating environmental research activities, providing help and assistance regarding environmental research activities, initiating and organising such activities;
- cooperating with the European Environmental Agency (according to Council Regulations No. 120/1990/EEC);
- other prerogatives related to environmental protection stipulated by law or directed by the Ministry of the Environment.

The basic needs of the administration are in the field of non-compatible specific and sectoral laws and standards. This means that the basic environmental law provides a good framework, though it is not detailed enough for direct enforcement.

Another problem is enforcement by the environmental inspectorates, some of whose responsibilities overlap with those of other inspectorates and ministries.

The solution is to either establish a single body responsible for issuing all types of environmental permits or to make it compulsory to obtain approvals from environmental authorities.

Institutions Connected to the Environmental Protection Agency

The government institutions closely cooperating with the EPA and the SEI are the following:

- the Republic Institute for Health Protection;
- the Hydro-Meteorological Institute;
- the Ministry of Agriculture, Forestry and Water Economy; and
- the Waters Fund.

The Republic Institute for Health Protection

This institute has the following organisational structure:

- Department of Epidemiology and Microbiology;
- Department of Hygiene and Protection of Human Environment;
- Department of Social Medicine;
- Department of Control and Investigation of Drugs; and
- service for General Legal and Common Affairs.

Only the Department for Hygiene and Protection of Human Environment is directly connected to the EPA. The department consists of the following units:

- Communal Hygiene;
- Hygiene and Nutrition;
- Codex Alimentarius Office (FAO Office for Standardisation of Food);
- Dietetics with Counselling,
- Sanitary-Chemical and Toxicological Examinations;
- Articles for Common Use; and
- Monitoring of Radioactive Contamination and Protection from Ionising Radiation.

Department personel consists of specialists in hygiene, sanitary chemistry, nuclear physics, and skilled laboratory technicians. The employees are highly educated.

The department is a structural organising and technical unit of the Institute for Health Protection. The department is the main body that deals with national policy in the field of preventive medicine, and primarly with activities related to environmental health. The professionals of this department directly contribute to the development of national policy, and manage problems in the field of protection of the human and working environment.

The department also coordinates and directs the work of the sanitation and hygiene services.

Under the Programme for Preventive Health Protection of FYR macedonia (the sanitation and hygiene section) the department carries out:

- activities in radio-bioecology and radio-biodosimetry;
- monitoring sanitary-hygiene conditions in drinking water supplies,
- monitoring the hygiene of surface water and wastewater, and
- monitoring the level of sanitation in the environment.

The institute implements this programme to evaluate air quality and its effects on health. It also analyses food quality and commonly used articles. It also monitors the alimentary daily intake of chemical contaminants. Related analyses are carried out in the department's laboratories.

Department activity is based on national and international reference regulations and standards in toxicological laboratory analyses of environmental components. It takes over 20,000 samples annually. The department also prepares professional and expert reports at the request of governmental and non-governmental institutions.

The Hydro-Meteorological Institute

This institute monitors the chemical and physical characteristics of air and water pollution. Systematic checks of surface-water quality began in 1964, while air quality has been monitored since 1974. Water and air

are analysed in the institute's laboratory on a monthly basis and on additional occasions as deemed necessary.

The main activities of the institute are as follows:

- air quality monitoring at 23 measuring stations on a national level;
- measuring emissions from stationary sources;
- monitoring and assessment of trans-boundary air pollution;
- assessment of atmosphere changes, with an emphasis on pollutants that have an impact on human health;
- monitoring surface water quality at 20 stations on a national level;
- occasional analysis of drinking, and industrial wastewater quality; and
- monitoring of chemical and toxicological water pollution by radiological and biological analyses.

On the basis of collected data, a specialised multidisciplinary group of experts assesses air and water quality. The results are presented in studies and annual reports to all interested parties.

The Ministry of Agriculture, Forestry and Water Economy

The EPA and SEI cooperate with the Ministry of Agriculture, Forestry and Water Economy because agriculture, forests and waters are within its domain.

Waters Fund

The government has established a special fund for water protection in general. The Waters Fund revenue is derived from pollution charges levied on all individuals and legal entities that pollute. A special public enterprise that oversees water economy collects this revenue. Fees are based on a fixed rate per "pollution unit".

Other government bodies that cooperate with the SEI or even coordinate their work with the SEI are the inspectorates of other ministries, such as the:

- State Inspectorate for Forests and Hunting;
- State Inspectorate for Waters;
- State Agriculture Inspectorate; and
- State Health and Sanitary Inspectorate.

Collaboration with these inspectorates is needed because violations of the Environmental Act are usually violations of other laws as well, e.g. releasing toxic and waste materials into the soil may cause contamination of underground waters, which may then contaminate the springs of drinking water. Drinking water is controlled by the State Health and Sanitary Inspectorate.

There is also a specific situation when environmental damage is a secondary consequence of another crime. If someone starts a fire or detonates a bomb, the degradation of the environment is an indirect consequence.

Cooperation with other institutions or scientific institutes is important when the inspectorate is performing its compliance assessment function. There is a need for horizontal collaboration with other state enforcement bodies. This type of collaboration already exists, but there is room for improvement. The integrated inspector's approach to enforcement is carried out only on an ad hoc basic.

Permitting System and Connection to the EPA

According to the Environmental Act, investors are obliged to protect the environment in pursuing technological processes. The minister of environment determines the type of facilities and technologies for which EIA and technological documentation must be obtained. Article 29 of the Environmental Act requires individuals and legal entities that have caused pollution to submit analyses to the MoEPP on the sources of such pollution, along with the steps they will take to reduce it to maximum permissible concentrations.

Legal entities and individuals who pollute the air, water or soil are obliged to take adequate measures and to protect the environment and nature. They must monitor the impact of pollution on the quality of environment and nature, and collect the evidence of the results.

According to Article 30 of the Environmental Act, on the basis of the submitted technical documents, the MoEPP may issue a written permit for the integrated prevention and control of pollution (IPCP). This permit means that the MoEPP approves the eco-project. The permit outlines the conditions under which business activities may start. If the facility changes its technical process to one that is included on the MoEPP's list, the procedure must be repeated. (For more information see Annex 2.)

The Environmental Act adopted in 2000 established the permitting process. Article 30 gives details on the procedure. However, it has never been fully implemented because of professional shortcomings at the Ministry of Transportation. "Permitting," as defined in EU legislation, does not take place in FYR Macedonia.

Compliance Control and Compliance Promotion

The SEI enforces environmental laws and regulations.

Compliance checks involve an assessment of adherence to basic environmental law as well as with existing sectoral laws. Because an effective permitting process is

not in place, and since only some polluters have environmental permits, inspectors may only make inspections if legally permissible pollution limits are exceeded.

The present needs of the SEI are additional personnel, including a broad network of local inspectors.

Enforcement Procedures

Through the State Environmental Inspectorate, MoEPP supervises compliance with environmental laws, regulations and policies. (For more information see Annex 3.)

The main enforcement tool is inspectorate supervision, which involves:

- technical measures taken by polluters;
- supervision of natural resources;
- protection from the waste, ionised and non-ionised radiation; and
- noise reduction.

The inspectorate supervision is enforced by the SEI through administrative procedures. Inspectors who detect legal infractions have the authority to:

- give orders to eliminate pollution or environmental degradation, and to restore the environment to its original state within a specified period of time;
- ban the activities of legal entities or individuals that harm the environment, regardless of whether the violators possess the relevant permits provided by law;
- prohibit the use of working premises, equipment, appliances or devices that adversely affect the environment and fail to meet prescribed conditions;
- temporarily seize equipment, devices or appliances that cause environmental pollution or degradation until any defects have been corrected, or until the court makes a final decision; and
- enforce re-cultivation within a reduced time-frame.

The SEI issues written permits for taking measures. If the inspectorate's decisions are not respected, and if the law-breaker is identified, the SEI is authorised to initiate criminal proceedings, which usually leads to the offenders being fined.

The penalty charges are divided into several groups according to their amounts. Fines may be imposed on both individuals and legal entities.

Punitive measures are also outlined in the Criminal Code (*Official Gazette of RM,* No. 37/1996). The Criminal Code has a special Chapter entitled: "Criminal offences against the Environment."

Civil liability is possible if damage is caused. This liability is regulated by the Law on Obligations.

Insurance claims related to environmental damage have not been reported.

To exercise their executive powers, inspectors need more legal training, as they lack administrative procedure knowledge. Inspectors cannot plan for future work because they are too few and their time is fully occupied with ad hoc visits.

There are no liability provisions in the legal system, and inspectors who cause damage cannot be made to pay for it. This is a result of the legal system: the liability of an inspector or other government employee cannot easily be proved in court.

Environmental Inspectorate Organisation, Human Resources, Training

The SEI is one part of the MoEPP (Annex 4). It has a director and seven deputies, who are spread between the cities of Skopje, Gostivar, Strumica and Veles.

The inspectors in the SEI have the following academic qualifications:

- four have bachelor's degrees in technology;
- two are qualified civil engineers;
- one is an agriculture engineer; and
- one has a bachelor's degree in biology.

In addition to inspectors, the SEI has a lawyer, another civil engineer and two mechanical engineers.

The SEI has five passenger cars and three off-road vehicles. The inspectorate has six personal computers.

For its inspections, SEI staff have the following equipment:

- eight Canon EOS 3000 cameras;
- eight Olympus dictaphones;
- eight Maglite flashlights with rechargeable batteries;
- eight Panasonic VHS – C video cameras;
- eight pairs of binoculars;
- ten alarm dosimeters for measuring absorbed and emitted doses of ionised radiation;
- two portable detectors for beta and gamma ionised radiation;
- six Motorola walkie-talkies;
- eight cellular phones;
- one patrol boat;
- eight life jackets; and
- sundry protective clothes.

To facilitate capacity-building and institutional strengthening in the SEI, two projects have been implemented through UNDP and the Programme. These projects have included visits to similar institutions in the countries of CEI and the EU, and technical assistance.

The SEI is financed from two sources. Basic financing is covered by the budget of the MoEPP (80%). The remainder is derived from the MoEPP's own income. (This revenue comes from polluters who are obliged to pay for the measurements of emissions, noise levels and other factors).

After the establishment of the SEI the most outstanding difficulties were the lack of vehicles and communication equipment, and a seperate laboratory for MoEPPs. Due to the very low number of inspectors, these problems remain largely unresolved.

Environmental Inspection in Practice

The SEI keeps statistical data on all inspections and site visits. At the end of the year, annual reports are prepared including the number and type of the activities performed.

Approximately 1,000 visits are made to legal entities, and some 950 written reports are issued each year. Approximately 30 cases annually result in criminal action being taken. About five cases are reported to the District Attorney's Office for criminal proceedings to be enacted. In the rest of the cases, enforcement measures are not required because polluters fulfil their legal obligations according to written decisions issued by the SEI in the administrative procedure.

Up to 70% of the visits are made in response to complaints filed by citizens, and the rest are made in the course of the inspectorates' routine supervisory activities.

Data Storage and Retrieval Systems

The MoEPP's Information Centre for the Environment (Annex 5) handles the collection, processing and storage of data relevant to the environment. The main task of the centre is the operation of an information system for environmental protection. The centre receives the data from other government institutions, as well as from scientific and expert organisations.

All government institutions are obliged to centralise collected data into the centre. Potential polluters must keep records about the quantities and type of waste and dangerous materials they use and produce in their regular operations. This data should be submitted to the centre, which then publishes the collected information.

The basic functions of the centre are as follows:

- using and transferring the data from other information and statistics systems;
- collecting and processing data about the state and quality of the environment; and
- public presentation of data about the quality of the environment.

The centre consists of two sections: the Information Service and the Public Communication Office.

There is also information storage. Information is not collected into any information system. The information is only connected to the case files. The major polluters have a separate case file in which all information, written decisions, records on visits, citizens' reports, and laboratory measurements are kept.

The SEI needs more computer hardware and training in the use of the computers.

Monitoring and Sampling, Access to Information

The Central Laboratory monitors pollution sources and samples air, water and soil as well as noise levels. The laboratory has specially trained personnel and special equipment for monitoring, sampling and analysis. It makes analyses at the behest of the SEI. Monitoring and sampling can also be carried out at the request of any polluter. The public may access this information through the Information Centre of the MoEPP.

In addition to the MoEPP the following organisations are also involved in the monitoring process:

- Hydrometeorological Institute;
- Republic Institute for Health Protection;
- Hydrobiological Institute of Ohrid; and
- other scientific and expert organisations authorised by the minister of the environment.

Data collected by these bodies and institutions are then passed on to the Ministry's Information Centre.

The SEI is in charge of making sure those responsible fulfil their requirements for self-monitoring and reporting.

Inspectors perform sampling on an ad hoc basis only. In more complicated situations sampling and quality assurance are overseen by the CL.

The skills of the present staff are adequate, though monitoring equipment could be improved.

Compliance Assessment

FYR Macedonia's juridical system does not provide any legal basis for institutionalising assessment of compliance with environmental laws.

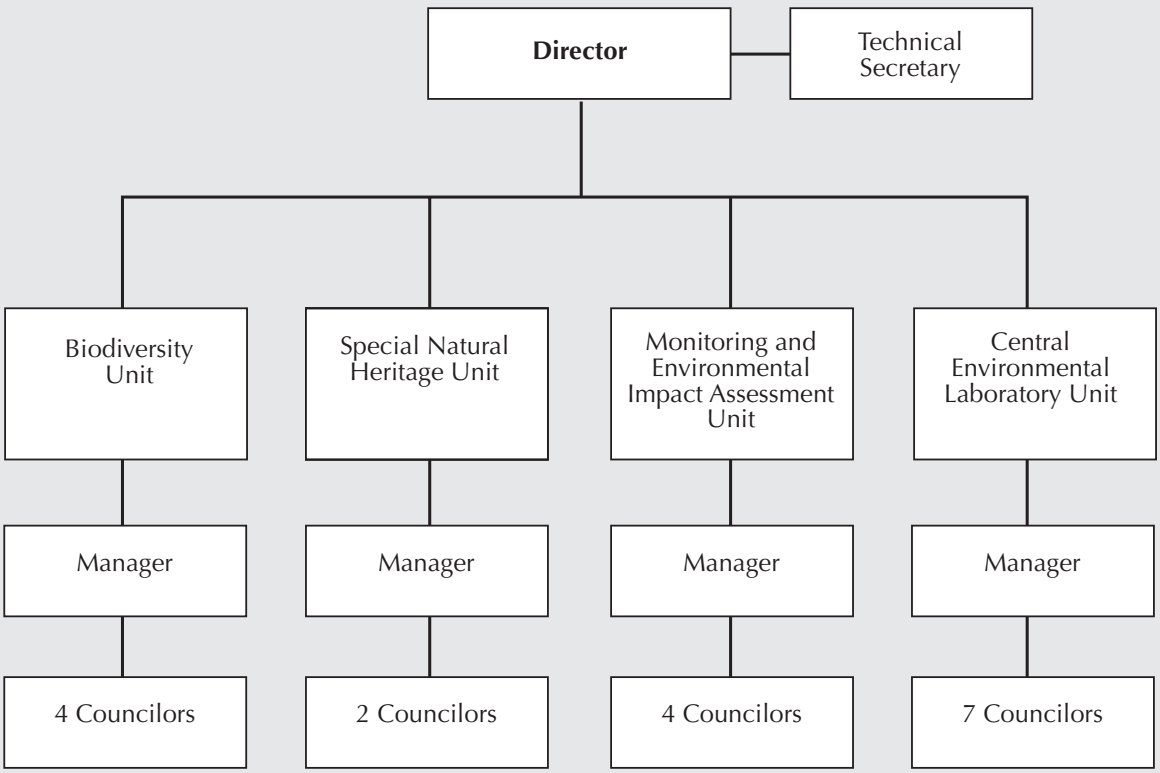
Enforcement Actions and Reporting Capabilities

In their reports, inspectors note who is being inspected, what sort of operation it is, what precisely has been inspected, what pollution data has been collected, and what measures were taken, if any. These reports are then incorporated into periodical and annual reports.

On the basis of these reports the director of the SEI assesses the work and efficiency of every inspector.

Peer reviews are not carried out, nor has Parliament or any other state institution done anything similar.

Annex 1: **Structure of the Environmental Protection Agency**



Director: **Konstantin Siderovski**
Biodiversity Unit: **Aleksander Nastov**
Special Natural Heritage Unit: **Vasil Anastov**
Monitoring and Environmental Impact Assessment Unit: **Sokol Klinarov**
Central Environmental Laboratory Unit: **Katica Vasilevska**

Annex 2: **Articles 42-47 of the Environmental Act**

(The Act on Environment and Nature Protection and Promotion, *Official Gazette* No. 69/96, no.13/1999, no. 41/2000)

Article 42

During supervising the implementation of measures to protect the air against pollution, the inspector shall be obliged to specify whether:

1. the polluter has permissible prerequisites for reducing pollution levels, in accordance with technical-technological standards concerning equipment and technology used, and with legal norms;
2. in cases of excessive utmost levels of emissions and permissible imissions, the pollutant has taken the necessary technical and technological measures;
3. the polluter has carried out prescribed emission measuring procedures, and records of measurement procedures already conducted are being kept;
4. treatment facilities function in accordance with prescribed technical standards;
5. the legal entity or individual in question has developed environmental- technological projects and whether it has been implementing the same;
6. legal entities and individuals mentioned under Article 18 of this Act, regularly and within prescribed time periods, submit relevant reports and data to the Ministry of the Environment and the Centre;
7. monitoring systems have been functioning well; and
8. specifies other circumstances within his/her competence are specified.

Article 43

In supervising the implementation of measures to protect waters against pollution, the inspector shall be obliged to specify whether:

1. the entity possessing (i.e. the user, the source of pollution has provided prerequisites for reducing pollution down to permissible level;
2. in cases of exceeding the permissible level of quantities of hazardous substances in waste technological and sanitary waters, or when there is an increased temperature of technical waters, the entity possessing or the user has taken appropriate technical-technological measures;
3. the user has conducted the necessary measurement procedures on the quality of wastewaters prior to their being released into natural recipients (rivers, lakes, soil);
4. legal entities and individuals mentioned under Article 18 of this Act, regularly and within the terms specified, submit relevant reports and data to the Ministry of the Environment and to the Centre;
5. the legal entity or the individual in question has developed environmental-technological projects, and whether it has been implementing the same;
6. monitoring systems have been functioning well; and
7. other circumstances within his/her competence are specified.

Article 44

In conducting supervision of the implementation of measures to protect soil from pollution, and erosion, the inspector in charge shall be bound to specify whether:

1. measures have been taken to limit pollution and erosion to prescribed levels;
2. in cases where pollution and erosion have exceeded the levels permissible, and whether adequate bio-technical measures have been taken;
3. prescribed projects concerning soil recultivation have been respected;
4 the legal entity or the individual has prepared environmental/technological projects and whether it has been implementing the same;
5. monitoring systems have been functioning well; and
6. other circumstances within his/her own competence are specified.

Article 45

In conducting supervision of the implementation of measures of protection against hazardous noise, the inspector in charge shall be bound to specify whether:

1. the owner or user of the noise source has provided prerequisites for keeping the noise within the limits prescribed;
2. in cases of cessation of conditions under which a higher level of noise has been allowed as an exception, whether noise itself has decreased;
3. the owner of the noise source has taken the prescribed technical/technological measures to keep the noise within the limits prescribed regarding relevant equipment and technology and the environment in whichpeople live;
4. facilities for measuring noise have been functioning in accordance with relevant norms;
5. the legal entity or the individual has prepared environmental/technological projects and whether they have been implementing the same;
6. monitoring systems have been functioning well; and
7. other circumstances within his/her own competence are specified.

Article 46

In conducting supervision of the implementation of measures to conserve particularly protected special natural resources and bio-resources, the inspector in charge is bound to specify whether:

1. protection of the plant and animal world and protected special natural resources has been conducted under the conditions and in a manner prescribed by Law;
2. cadastres of protected special natural resources have been kept in accordance with the methodology prescribed and whether cadastre data have been submitted to the administrative body in charge;
3. programmes regarding conservation and development of protected special natural resources and annual plans concerning their implementation have been passed and implemented;
4. protected mobile nature goods have been exported or taken abroad with relevant approvals and whether approvals issued have been recorded;
5. other circumstances within his/her own competence are specified.

Article 47

In conducting supervision of measures taken for protection against ionic and non-ionic emissions, the inspector in charge shall be bound to specify whether:

1. the owner or the user of the ionising and non-ionising radiation source has provided prerequisites for keeping the emission itself within the limits prescribed;
2. in cases of exceeding the prescribed highest limit values, whether adequate measures have been taken;
3. prescribed measures and checking procedures have been carried out;
4. records on ionising and non-ionising radiation measurements have been kept;
5. the legal entity or the individual has developed environmental/technological projects and whether it has been implementing the same;
6. monitoring systems have been functioning well; and
7. specifies other circumstances within his/her own competence.

Annex 3: **Articles 52-58 of the Environmental Act**

(The Act on Environment and Nature Protection and Promotion, *Official Gazette* No. 69/1996, No.13/1999, no. 41/2000)

Currency exchange: EUR 1.00=MKD 62.00

Article 53

A fine from MKD 200,000 to 300,000 shall be imposed upon a legal entity for an offence should it:

1. in the using of natural wealth, exploitation of mineral raw materials, construction of new cites, re-construction of existing cities, production or execution of other activities, cause damage or considerable changes to natural resources and bio-resources, or in some other manner degrade and pollute the environment and nature against the norms prescribed, and should it fail to provide for the protection of the environment and nature with its technical documentation and with the implementation of the same (Article 15, Paragraphs 1 and 2);
2. by using mineral raw materials, disposing waste barren substances, ash and slag and by carrying out other action, degrade soil and fail to re-cultivate or in some other way rehabilitate the same through a rehabilitation project (Article 17);
3. fail to keep records of data on harmful and hazardous substances inputs during the pursuit of an activity and on the nature and quantities of waste, harmful and hazardous matters it has created and released into the medium of the environment, and should it fail to submit relevant information to the Ministry of Environment (Article 18);
4. produce and release certain commodities and conduct particular actions that jeopardise the environment or people's health, despite the relevant prohibition act of the minister of environment (Article 19);
5. release into public an item (commodity) , described as an "eco-item," which does not meet relevant manner and criteria specified by the minister of environment (Article 20);
6. fail to cease its actions and conduct additional scientific and expert research and inform of that the Ministry of the Environment, in such order to eliminate the causes of environmental and nature degradation (Article 22, Paragraph 1);
7. throw away or disposes of industrial, dangerous and special waste outside sites specified for that purpose (Article 23, Paragraph 1);
8. fail to conduct re-cultivation of a waste-disposal facility on the basis of a relevant project (Article 23, Paragraph 2);
9. import waste, hazardous, dangerous and radioactive substances and release, keep, use and dispose of such substances (Article 24, Paragraph1);
10. import technologies, technological lines, licences and substances that are prohibited in the country of origin or country of export for environmental reasons (Article 24, Paragraph 4);
11. import or produce substances placed on the list of substances containing dangerous and harmful matters, the import, production or use of which is prohibited in the Republic of FYR Macedonia (Article 26);
12. fail to submit the necessary data to the entity developing the cadastre of pollutants of the air, waters, protected special natural resources, pollution and degradation level of the soil and to the register of waste and harmful matters (Article 28);
13. fail to develop and submit to the Ministry of the Environment an environmental/technological project and implemented measures, normatives and standards prescribed by the law for the protection of the environment and nature and

should it fail to monitor the impact of the pollution source over the quality of environment and nature, or fail to keep records of results derived from measurements conducted (Article 29)

14. [expert organisations] fail to submit relevant data to the Ministry of the Environment (Article 31, Paragraph 2);
15. put into use or traffic protected bio-resources and nature entities without permission (Article 32);
16. [legal entities] fail to develop, submit, register and programme for protected special natural resources (Article 33);
17. use and apply equipment, devices and appliances generating noise exceeding the values permissible by law (Article 34); and
18. when using equipment, facilities and plants that are sources of ionising and non-ionising radiation, fail to provide adequate protective measures and professional staff and depose of waste outside sites specified for that purpose (Article 35, Paragraph 1).

A fine of MKD 30,000 to 50,000 shall be imposed upon the person or particular legal entity responsible for actions mentioned under Paragraph 1 of this Article.

With reference to the activity referred to in paragraph 1 of this Article, a protective measure prohibiting the execution of a given activity for a period of six months to five years shall also be imposed on the legal entity.

With reference to the person that, as a particular legal entity, has been responsible for actions mentioned under Paragraph 2 of this Article, in addition to the fine, safety measures prohibiting the execution of profession, activity or duty for a period of three months to one year shall also be imposed.

Article 54

A fine of MKD 10,000 to 30,000 shall be imposed upon each individual performing a registered activity should it fail to act in compliance with provisions from Articles 15, Paragraphs 1, 17, Paragraphs 1, 18 Paragraphs 1, 22 Paragraphs 1 and 29 of this Act.

Article 55

A fine of MKD 5,000 to 30,000 shall be imposed upon the person responsible of the legal entity or the organisation should they:

1. fail to keep records of protected areas and entities within the register, or fail to submit documentation in the manner prescribed to the competent body (Article 33); and
2. fail to adopt a programme in compliance with provisions from this Act (Article 33).

Article 56

A fine of MKD 5,000 shall be imposed on the spot on an individual for an offence (a mandatory penal measure) if:

1. they fail to act in accordance with the order given by a caretaker of protected natural goods (and on the basis of the latter's authorisation) or they prevent the latter from performing his/her duties;
2. they throw away or dispose of any waste whatsoever outside the site intended for that purpose. Should an individual be caught while disposing of waste from a trunk outside a waste disposal site, the trunk shall be confiscated on the spot and charges levied on that individual and the body responsible over said individual (Article 23, Paragraph 1); and
3. concerning action mentioned under Item 2 of this Article, apart from inspectors mentioned under Article 40 of this Act, the right and responsibility for issuing penalties shall
4. be given to an officer of the Ministry of Interior in charge of public order and peace.

In cases where an individual fails to pay the mandatory penalty on the spot, the inspector in charge shall report the offence as a criminal act on the basis of his/her own findings, either to the Ministry of Interior official responsible for maintaining public order and peace, the national park guard, or some other individual authorised to safeguard protected natural goods.

Article 57

A mandatory fine of MKD 3,000 shall be imposed on the spot should an individual do the following within a protected area:

1. park a vehicle outside the site intended for the purpose, within a site of protected special natural resources, or drive a vehicle off the road permitted over green areas;

2. light a fire outside the site allowed for that purpose;
3. throw away garbage outside the site intended for that purpose;
4. enter prohibited zones;
5. wash his/her vehicle by or in rivers and lakes;
6. damage marking and warning signs;
7. allow leakage of motor oil and transmission fluid into the soil, storm drains, communal sewerage networks and wastewater collection networks, rivers or lakes;
8. pick or gather protected plant or animal species, or cause damage to trees and bushes;
9. graze cattle within protected areas;
10. introduce dangerous facilities, accessories or substances that may jeopardise a protected nature part or entity; and
11. leave damaged vehicles or vehicle parts.

Penalties mentioned under Item 1 of this Article shall be collected on the spot (mandatory) either by the inspector of environmental protection conducting supervision over measures implemented to conserve protected nature goods, an officer of the Ministry of Interior in charge of keeping public order and peace, a guard of a national park or some other individual in charge of safeguarding nature goods.

In cases where an individual fails to pay the mandatory penalty on the spot, the inspector in charge shall report the offence as a criminal act, on the basis of his/her own findings or on the charge brought by the Ministry of Interior officer in charge of maintaining public order and peace, the national park guard or some other individual authorised to safeguard protected nature.

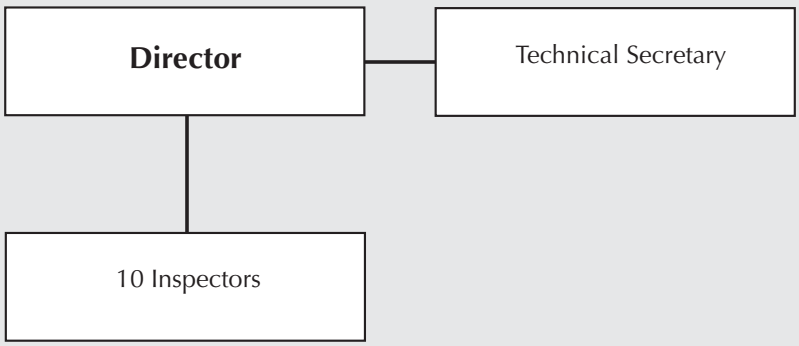
Article 58

A fine of MKD 50,000 to 150,000 shall be imposed for an offence upon a legal entity should they:

1. fail, within the protected area, to carry out measures of protection and use of forests and forest land specified by the programme of protection and development of national parks;
2. fail to mark protected areas and borders in the manner prescribed;
3. gather wild animal and plant species, seeds, fruits, eggs and other less-developed forms for the purposes of exploitation or release into traffic, contrary to relevant regulations, and
4. fail to provide for or prevent the execution of supervision for inspection purposes, or fail to provide required information, samples and materials.

Concerning offences mentioned under Items 1, 2 and 3 of this Article, a fine of MKD 10,000 to 50,000 shall be imposed upon the person in charge at the legal entity.

Annex 4: **Structure of the State Environmental Inspectorate**

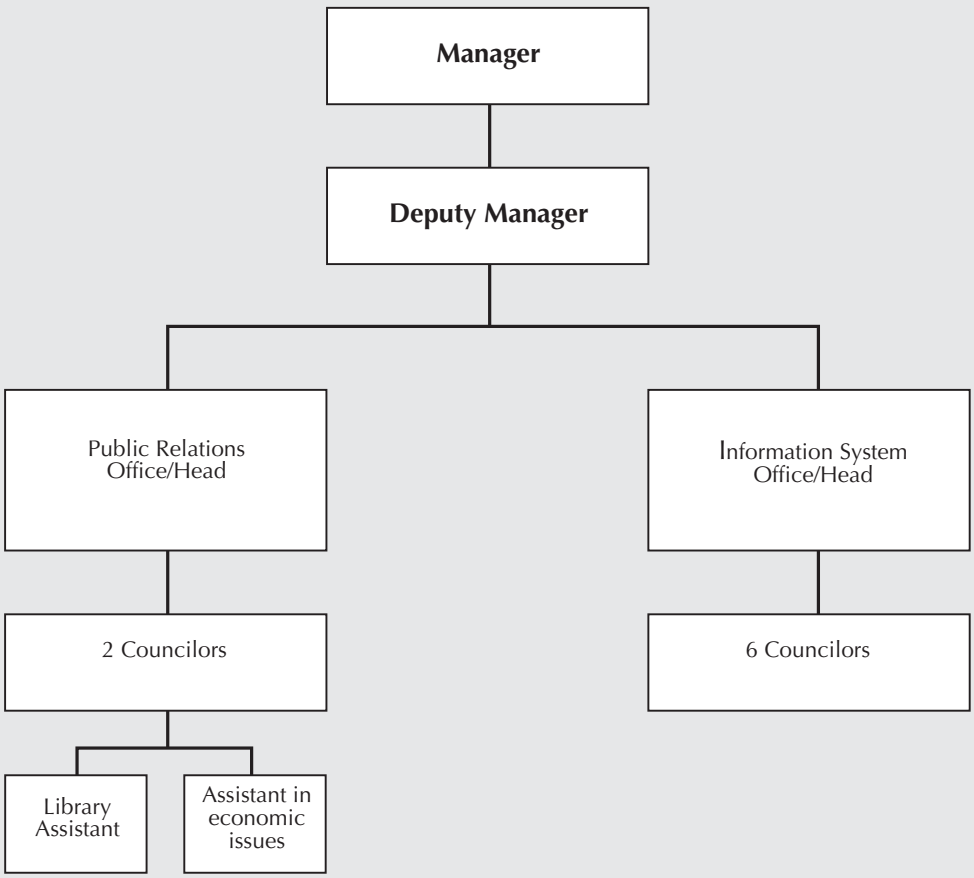


Currently only 7 inspector positions have been filled:

- Skopje: 4 + director
- Strumica: 1
- Veles: 1
- Gostivar: 1

Contact: Tel: (389-2) 366-930, ext. 133
Fax: (389-2) 366-931

Annex 5: **Structure of the Environmental Information Centre**



Manager of Information: **Svetlana Gyorgjeva**

Deputy Manager of Information Centre: **Sasho Sekulovski**

Head of Public Relations Office: **Marionka Vilarova**

Head of Information System Office: **Biljana Siderovska**

Country Profile: **Romania**

Prepared by
Nicolae Horea Avram

February 2002

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Country Profile: **Romania**

Administration

Ministry of Waters and Environmental Protection

The Ministry of Waters and Environmental Protection (MWEP) is a specialised body of the central public administration directly subordinate to the government. MWEP implements national water and environmental policy, develops harmonisation strategies and regulations; and coordinates the application of government strategy in the field of environmental protection.

According to Government Decision No. 17 issued in January 2001, the MWEP performs the following in the field of environmental protection:

- issues environment permits and (depending on the case) agreements, authorisations and special permits in accordance with Romanian and international law;
- enforces special regulations regarding organisation establishment and environment-related liabilities within the privatisation process through its regional units;
- organises the environmental and natural resources monitoring activities, elaborates and publishes information and reports concerning environmental status, participates in the sub-regional, regional and global monitoring programmes regarding the environment and natural resources;
- organises and coordinates the development of accreditation procedures for environmental and water management laboratories and for certification of environmental management systems;
- acts as a technical and administrative body for environment-related international treaties, conventions and agreements, and as a national focal point and/or competent national authority for activities coordinated by international organisations and institutions according to the provisions of the international legislation ratified by Romania;
- elaborates research, studies, prognoses, policies and strategies in the field of environmental protection with the purpose of obtaining information and data required to support decisions regarding environmental protection and sustainable development;
- promotes juridical, economic and financial instruments, and free market principles to stimulate the implementation of environmentally friendly products and technologies, and to change consumption and production models;
- elaborates and promotes projects on normative acts, methodological norms and application instructions in the field of environmental protection;
- initiates project standards, and revises standards according to their international evolution and improvement requirements;
- issues licenses for private and juridical persons authorised to develop environmental impact assessments and ecological balances;
- is directly responsible for the protection and preservation of natural habitats, for the preservation of biodiversity and sustainable use of its resources, and for the development and administration of the national network of protected areas in accordance with the policies and practices on the European and global levels;
- provides the legal and institutional framework to facilitate and stimulate dialogue between state authorities, the scientific community and civil society on the strategies and decisions regarding environmental and social-economic development of the country;
- updates and enforces the strategy and the National Action Plan for Environmental Protection and the National Action Plan for Preservation of Biodiversity and Sustainable Use of its Components, as well as other environmental protection-related strategies and policies; and
- provides coordination and technical secretariat of the Inter-Ministry Committee for the promotion of the priority objectives established in the National Action Plan for Environmental Protection, as well as of the National Committee for Climate Change and of the National Committee for Ozone Layer Protection.

There are several units subordinate to or under the authority of the MWEP:

- Units subordinate to the MWEP:
  Public institutions financed by the state budget, legal persons, with a number of employees not exceeding 1,883:
  - the National Commission for Control of Nuclear Activities;
  - 42 county environmental protection inspectorates (CEPI), including the Bucharest municipality inspectorate; and
  - administration of the "Danube Delta" Reservation of the Biosphere.

- Units under authority of the MWEP:
  - *Apele Romane* S.A. (Romanian Waters Inc.) — National Waters Administration Company; and
  - "*Institutul Nacional de Meteorologie, Hidrologie i Gospod, Rire a Apelor"* S.A. — (National Institute for Meteorology, Hydrology and Water Administra-tion Inc).

- Scientific research and design units coordinated by the MWEP, legal persons, financed by extra-budgetary resources:
  - the National Institute for Research and Development for Environmental Protection – INCDPM Bucharest;
  - the *Grigore Antipa* National Institute for Marine Research and Development – INCDM Constanta;
  - the Danube Delta Research and Development Institute (INCDDD).

Environmental Protection Inspectorates

The responsibilities and competencies of the Environmental Protection Inspectorates (EPIs) are stipulated in Government Decision No. 17/2001 regarding organisation and operation of the MWEP (Annex 3). The CEPIs supervise and coordinate the activities related to the environment, biology, natural resources, ecological balance and environmental protection. They develop draft regulations and the norms regarding the permitted content of toxic emissions. They obtain data on the quality parameters and their evolution of environmental sectors. The CEPIs also offer technical consultation and provides field expertise for every investment economic agent in the respective county, and ensure the application of the environmental strategy.

The CEPIs also:

- Elaborate recommendations for sector strategies and environmental policy, setting up deadlines according to the stages of the transition to the market economy as well as for those policies regarding environmental planning in correlation with land and urban development, environmental restoration and reconstruction with the purpose of implementing a national environmental strategy;
- create the organisational framework required for access to information and for the participation of other local and central authorities, non-governmental organisations (NGOs) and the population in the decision-making process on policies, regulations, licensing procedures and urban and land development plans regarding the environment;
- initiate law proposals, technical norms, regulations, procedures and directives according to international standards;
- elaborate and implement environment-related programmes;
- elaborate educative materials on the importance of environmental protection;
- follow up the implementation measures of international conventions on the environment signed by Romania;
- monitor and analyse the stages of enforcement of the environment law and draw up annual reports regarding the state of the environment, which are then presented to the MWEP and then published by the government;
- sanction the entities responsible for breaking the laws on the environment;
- provide the interested parties with centralised data regarding the state of the environment and environmental protection programmes and policies;
- periodically consult NGOs and other representatives of civil society with the purpose of establishing a general strategy on the environment and decision making in cases that could affect the environment;
- organise the Environmental Guard in two years, starting with the promulgation of Governmental Decision No. 1167/2001 on the establishment of the Environmental Guard.

CEPIs cooperate with all local authorities and economic agents and are entitled to receive information, data and documents connected to environmental protection within limitations of the law and of orders issued by the MWEP.

CEPIs also monitor and analyse the way in which the specialised regional bodies, private and state-owned enterprises and private persons in the respective counties fulfil their obligations as stipulated by the environment law and take measures in this respect.

CEPIs support the economic agents in determining the causes that lead to deterioration of the environmental sectors' quality, and in the removal of such causes. They are also actively involved in the information gath-

ering process on the environmental sectors and in establishing and enforcing, within the confines of the law, measures to remove the causes that lead to the deterioration of the environment, ecological balance and resources.

In cooperation with the specialised regional bodies the CEPIs draw up synthesis papers and technical reports regarding the evolution of the environmental sectors, life quality and ecological balance. The reports are analysed together with local authorities and economic agents, and are then communicated to the MWEP.

According to the Environment Law No. 137/1995, Ministerial Order No. 541/2000, and Government Decision No. 17/2001 and No. 125/1996, and relevant job descriptions, the responsibilities of the following units detailed in the following sections.

Service for Ecologic Inspection and Monitoring of Environmental Investment

The Service for Ecologic Inspection and Monitoring of Environment Investments (SEIMEI) each year elaborates the inspection policy of the CEPI, thus ensuring the planning of inspection activities by establishing objectives, tasks and concrete actions.

The SEIMEI organises inspections within its regional jurisdiction by inspecting the operating activities of economic agents that could have a negative impact on the environment, especially those companies and institutions which could significantly alter the environment, as defined by this regulation.

In cooperation with the staff from the ministerial specialised services, the SEIMEI organises and exercises control over the way in which legal dispositions, norms and standards in force are followed and applied for:

- atmosphere protection;
- surface and underground water and aquatic ecosystems protection;
- soil and land ecosystems protection;
- nature, landscape and natural habitat protection, preservation of biodiversity, flora and wildlife;
- exploitation of biological resources of flora and wildlife, including exploitation of fish from natural waters and hunting of wild animals;
- regime of protected areas and monuments of nature;
- human habitat protection;
- regime of pesticides and fertilisers for agriculture;
- regime of toxic chemicals and waste; and
- other aspects that fall within inspection service competence according to the laws and regulations in force.

The SEIMEI controls the way in which legal dispositions in force regarding authorisation of social and economic activities with a negative impact on the environment are obeyed and enforced, and takes measures as stipulated by the law.

The SEIMEI controls the way in which the provisions of the authorisation documents (agreements, permits, and other similar documents) issued by the authority for environmental protection are respected, and takes the measures as stipulated by the law.

The SEIMEI controls the way in which the provisions of the approved urban and land management programmes are respected, and takes measures according to the law.

The SEIMEI controls the implementation of the special measures of economic agents with a high risk of negative impact on the environment, including special measures to avoid environmental accidents in order to minimise the effects of natural disasters, and takes measures according to the law.

The SEIMEI advises the economic agents that operate social and economic activities with a negative impact on environment with a view to improving their environment-related performance, prevention of environmental pollution and/or maintaining and improving the quality of the environment and rehabilitation of polluted areas.

The SEIMEI organises and controls the import and export operation for hazardous or dangerous materials, products and other goods with a special trading regime according to international legislation regulating international trade with such products and goods, and it directly cooperates with all competent authorities, including customs, and takes measures according to the law.

The SEIMEI deals with complaints regarding violations of environmental law.

The SEIMEI participates with other departments within the CEPI in the elaboration of the local environmental policy and to improve the application of environmental law and regulations, mainly for those economic agents having a significant impact on the environment.

The SEIMEI cooperates with other departments within the CEPI in the issuing of authorisation documents, as well as in the elaboration of compliance programmes for existing activities that do not meet authorisation requirements. It monitors implementation of the measures established in compliance programmes and the meeting of set deadlines.

The SEIMEI also recommends various measures to CEPI management to improve cooperation with other departments of the EPI and participates in the elaboration of concrete action plans to correlate regulation, inspection and monitoring activities in order to improve the institutional capacity of the CEPI.

For economic agents that operate in two or more counties, the SEIMEI cooperates with the representatives of other CEPIs to address those activities/economic agents that have been identified by at least one EPI as having a significant impact on the environment.

The SEIMEI applies the measures stipulated by the law for disobeying legal dispositions, establishes the facts constituting offences and applies financial sanctions or, if required, informs law-enforcement authorities as stipulated by law.

The SEIMEI informs the MWEP on the necessity to develop specific regulations, guides or technical norms and on the personnel training requirements for specific problems, on a case-by-case basis.

The SEIMEI cooperates with other inspection and control bodies of local and central authorities, NGOs, private or legal persons, and can initiate or participate in common actions with all these institutions and organisations with the purpose of improving environmental inspection activities, pollution prevention, adherance to environment law, and improvement of environmental sectors.

The SEIMEI carries out any other inspection and control activities as stipulated by law and takes the relevant measures.

Service for Authorisation, Agreements and Permitting

The main responsibility of the Service for Authorisation, Agreements and Permitting (SAAP) is to analyse the technical documentation required for the procurement of the environment agreement and authorisation, in addition to the water management agreement and authorisation. After examining documentation, the SAAP draws up a guide containing the specific permits of other institutions necessary for the procedure of the authorisation.

The SAAP also analyses the environmental impact studies required for the procurements of the environment agreement and authorisation, analyses the technical documentation required for approval by the MWEP when the environment agreement elaboration is in the competency of the MWEP, and draws up a recommendation, which is then forwarded to the competent departments of the MWEP.

The SAAP verifies the data and information presented in the documentation of permit application.

The SAAP also issues consulting notes, participates in the committees for acceptance of investments that could constitute a possible risk to environmental sectors; ensures organisation of public debates, media coverage and consultation of civil society on the initiation of certain projects with an environmental impact; issues regulatory documents according to competencies attributed by the regulatory procedures for social and economic activities with an impact on the environment.

The SAAP makes proposals for research themes and investment works designed to prevent or combat environmental pollution; and also for the environmental impact assessment of large industrial units, construction works or land improvements. It participates with data and technical information in the elaboration of normative acts, standards and other general interest works as required.

Service for Integrated Monitoring of Environmental Sectors

The Service for Integrated Monitoring of Environmental Sectors (SIMES) organises the database attached to integrated monitoring systems at a county level by:

- collection and storage on a daily bases of data on the quality of environmental sectors, as provided by the laboratory subordinated to each CEPI, as well as of the data and information provided by other departments of the CEPI;
- collection and storage of data on the quality of environmental sectors, as received by fast and slow information flow channels or of the data provided by the laboratories within the system of the National Water Company;
- recording status of waste as well as toxic and hazardous substances, classification of localities, categories, branches of activity, recovery opportunities in cooperation with the SEIMEI and the newly established department for management of waste and toxic substances;
- drawing up informative notes regarding unusual environment-related events with respect to the provisions of information flow and their transmittal to superior authorities.

Bureau for Preservation of Nature and Biodiversity

The Bureau for Preservation of Nature and Biodiversity (BPNB) keeps records of endemic, rare, endangered, and protected species from natural fauna and flora and bio-geographic characteristics of the county's territory.

The BPNB also keeps records, verifies and analyses the condition of protected areas and monuments of nature in the county's territory, ensures that the organisation and administration plans of such areas administered by environment protection authorities are applied, and coordinates these plans for protected areas in the jurisdiction of other authorities.

The BPNB identifies and proposes protection regime for areas of terrestrial and aquatic natural habitats, plant and animal species of special interest, geological-palaeontological-and cave formations.

The BPNB makes proposals for ecological reconstruction of degraded land, regardless of the destination and form of ownership.

The BPNB analyses and participates in harvesting certain species from the local flora and fauna according to its competencies, upon request from economic agents. It also analyses and participates in the permitting process concerning preservation of natural habitats and biodiversity.

Department of Waste Management, Toxins and Dangerous Substances

This is a new department created to manage a database on urban and industrial waste, and to elaborate the Local Waste Management Plan at a county level. Its responsibilities include the implementation of waste legislation.

Department for Programmes, Projects and Public Relations

The responsibilities of the department are as follows:

- ensure an institutional and administrative framework for identification, promotion and implementation of projects and programmes of importance for the preservation of the environment at a local level;
- propose projects to reduce harmful effects on the environment from social and economic activities, and to support environmentally friendly technologies and techniques;
- disseminate information from programmes or projects relevant to environmental protection to all interested parties;
- compile centralised disposal data regarding the degree of implementation of central and local programmes and policies on the environment;
- make a prognosis regarding the quality of environmental sectors at a local level;
- initiate the elaboration of technical documentation for the project proposals to be financed by international projects and programmes with a special focus on the Danube and Black Sea basin and the Carpathian Mountains, as well as development programmes for special economic areas (regional and cross-border) with the help of specialised, decentralised services of other central and local authorities and the representatives of economic and social economic agents; and
- provide public-relations services for the CEPI according to specific procedures.

Specific legislation for operational activities of the Environmental Protection Inspectorates

Law No. 137 – issued on December 29, 1995 and republished on February 17, 2000 — the law regarding environment protection. The object of this law is the regulation of environmental protection as a major public-interest objective on the basis of the principles and strategic elements that lead to the sustained development of society (Annex 2).

Ministerial Order No. 125 — issued on March 19, 1996 — regarding approval or regulation procedures for economic and social activities with an impact on the environment. This order regulates the procedure of the environmental impact assessment, for the application and procurement of the environment agreement or, if required, environment authorisation, having in documentation the other associated permits of other institutions, according to the provisions of the Environment Protection Law and international obligations.

Ministerial Order No. 756 — issued on November 3, 1997 — the order regarding approval of regulations concerning environmental pollution assessment. This order regulates the procedures and technical norms concerning the identification of prejudices to the environment with the purpose of determining responsibilities and recovery of these prejudices.

Ministerial Order No. 184 — issued on September 21, 1997. This order details the procedures for drawing up the environment balance, its fields and contents as requested for the authorisation process, as well as regarding changes in ownership, destination or cessation of social and economic activities that have an impact on the environment in accordance to Law No. 137/1995 and Law 88/1991 regarding privatisation of state-owned companies with all subsequent completions and modifications.

Ministerial Order No. 462 — issued on July 1, 1993 — the order regarding approval of technical conditions concerning protection of the atmosphere and methodological norms on determining pollution with atmospheric emissions from stationary sources. The objective of these is the protection of humans, animals and vegetation, and of their biotopes, protection of water, soil and materials against atmospheric pollution that could lead to injuries or discomfort.

Government Ordinance No. 2 — issued on July 2, 2001 – regarding legal status of contraventions.

Law No. 73 — issued on May 4, 2000 — the law regarding the environment fund, modified by Government Ordinance No. 93/2001.

Ministerial Order No. 541/2000 – the order containing technical norms for the operation and organisation of control and inspection activities in the field of environmental protection. These norms establish a unitary

methodological and technical framework regarding exercising inspection attributes in environment protection and ensure reinforcement of the institutional framework on environmental inspection in order to make it more efficient according to Romanian law and international obligations incurred by Romania.

Ministerial Order No. 524/2000 — the order containing instructions regarding the methodology of elaborating atmospheric emissions inventories.

Ministerial Order No. 340/2000 — the order regarding approval of nomenclature of services that can be rendered by CEPIs as well as fees.

Law No. 655/2001 for approval of Emergency Governmental Ordinance No. 243/2000 — regarding atmosphere protection.

Law No. 107/1997 — law on waters.

Law No. 103/1997 — law on the wildlife fund and hunting.

Law No. 632/2001 for the approval of Government Emergency Ordinance No. 236/2000 — the law regarding the status of protected areas, preservation of natural habitats, flora and wildlife.

Law No. 426/2001 for the approval of Governmental Emergency Ordinance No. 78/200 — the law regarding waste.

Governmental Decision No. 173/2000 — the decision regarding the management of PCB and PCT (Biphenyl Policlorurates) substances from mineral oil.

Law No. 6/1991 — the law regarding ratification of the Basel Convention.

Law No. 69/1994 for ratification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Law No. 84/93 for the accession of Romania to the Vienna Convention for the Protection of the Ozone Layer, adopted in Vienna on March 22, 1985 and of the Montreal Protocol on Substances that Deplete the Ozone Layer, adopted in Montreal on September 16, 1987, and for the acceptance of the Amendment to the Montreal Protocol, adopted at the second Meeting of the Parties in London, June 27-29, 1990.

Governmental Decision No. 662/2001 — the decision regarding the management of oil waste.

Governmental Decision No. 1057/2001 — the decision regarding batteries and accumulators containing certain dangerous substances.

Law No. 74/1993 — the law for ratification of the Vienna Convention for the Protection of the Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer, and of Montreal Protocol on Substances that Deplete the Ozone Layer and the London Amendment to the Montreal Protocol.

Law No. 9/2001 — the law for accepting the Copenhagen Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer.

Law No. 206/2001 — the law for accepting the Montreal Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer.

Law No. 159/2000 — the law regarding a trade regime and restriction in the use of halo-hydrocarbons that affect the ozone layer.

Law No. 462/2001 — the law for approval of Emergency Governmental Ordinance No. 236/2000 regarding a natural protected areas regime, conservation of natural habitats, flora and wild fauna species.

Ministerial Order No. 647/2001 — the order regarding the permitting procedure of activities for sampling, capture, acquisition and trade in the domestic market, and import/export of species of wild flora and fauna, as well as procedure regarding trading activities with endangered and non-endangered species of wild flora and fauna.

Institutions with Similar Competencies Collaborating with the EPI and Their Responsibilities According to the Environmental Law

The CEPIs cooperate with the following organisations:

- Ministry of Internal Affairs and Police — especially with county inspectorates of police;
- Ministry of Agriculture, Foods and Forestry — especially with the Directory of Forests/Nature and its county directorates;
- Ministry of Health and Family — especially with county inspectorates;
- Ministry of Industry and Resources — especially with local and national companies;
- Ministry of Public Works, Transport and Housing — especially with local and national companies, and inspectorates;
- Ministry of National Defence;
- Ministry of Education and Research;
- port and river-catchment basin authorities;
- communities and municipalities; and
- NGOs — especially with working group for specific problems.

Companies, units or services of the Ministry of the Public Works, Transport and Housing and the Ministry of Internal Affairs ensure, on the basis of the norms approved by the central authority, environmental control in:

- emissions of gas exhaust;
- noise intensity and vibrations produced by vehicles;

- transportation of hazardous materials; and
- building safety inspections.

The decentralised institutions of the Ministry of Health and Family have the responsibility to perform the following:

- supervise the health status of the population in connection with the quality of the environment;
- control the quality of drinking water and food products;
- elaborate environment-related hygiene norms in cooperation with the MWEP;
- report annually on the influence of the environment on public health and cooperate with the MWEP in establishing and applying measures for improving the quality of life;
- cooperate with other ministries that have their own sanitary network to accurately access the health status of the population and to protect the environment in their field of activity; and
- cooperate with CEPIs.

Units of the Ministry of National Defence have the following competencies:

- elaborate specific norms and instructions according to the law, with respect to the ecological principles of environmental protection for its own activities and operations;
- supervise the compliance of military personnel with environmental protection norms for activities in military spheres; and
- restrict the actions of military personnel and apply sanctions for violations by said personnel of the environment protection legislation.

The units of the Ministry of Education and Research ensure the adaptation of educational programmes and plans on all levels to create awareness of ecological and environment protection principles.

Local authorities have the following competencies and responsibilities:

- supervise application of land and urban improvement plans in accordance with environment-related planning;
- supervise the subordinate economic agents to prevent accidental emission of pollution or uncontrolled storage of waste, and to develop waste-collection systems for waste recovery;
- adopt programmes for the development of the sewerage systems, water supply systems and wastewater management systems, as well as development of public transportation;
- provide specialised services of urban ecology and environmental protection and cooperate with the competent environmental protection authorities; and
- promote a healthy attitude in the community on environmental protection issues.

The police and the financial guard are obligated to provide support upon request to representatives of the environmental protection authorities. By March 2002, the Ministry of Waters and Environmental Protection will be elaborated, as will the job description for the Environment Guard, including the provision of new services.

Permitting System and Connection to EPIs

According to the Law of Environment Protection No. 137/1995, the environment protection authorities lead the authorisation procedure and issue agreements and permits.

An application for an environment agreement is compulsory for new investment and for modification of existing investment for the activities stipulated in Annex 3 of the above-mentioned law.

An application for an environment permit is compulsory for the operation of new economic agents that already possess an environment agreement, within one year of the promulgation of Law No. 137 for existing activities. Those activities which do not imply construction works require only an environmental permit, with the exception of those mentioned under point 8, letters *g* and *i* in Annex 2 of this law (*g*= activities implying clearing of forest vegetation outside the national forest fund; *i*= import and export of plants and animals from spontaneous fauna and flora — these activities are issued by a separate procedure).

The environment agreement and/or permit may be revised if new elements not known at the date of issuance occur, and in the case of their renewal when redrafting of the environmental impact assessment may be required. The environment agreement or permit may be suspended, for lack of compliance to its provisions for no more than six months. CEPIs can order the cessation of the activity or project execution after expiration of the suspension term. For existing activities that do not comply with the authorisation requirements, the CEPI orders the drawing up of an ecological balance and establishes a compliance programme in mutual agreement with the holder. The compliance programme is part of environmental authorisation. After expiration of each term in the programme, in the event of failure to comply, the competent CEPI orders activity to cease. All litigations generated by the issuance, revision or suspension of the environment agreement or

permit will be solved in accordance with Law No. 29/1990 on administrative contentions.

The authorisation procedure is a public one. The CEPI arranges media coverage of the projects and activities requiring an environmental agreement or permit and environmental impact assessments, as well as public debate. Specialised bodies, licensed private or legal persons, will perform the environmental impact assessments, and the owner of the project or activity will cover all expenses. This also applies when an environmental impact assessment renewal is required. The owner is responsible for the accuracy of information provided during the authorisation process, and the licensed body is responsible for the accuracy of the environmental impact assessment. In the event of change in destination or ownership of the investment, as well as when activities with an impact on the environment cease, the former owner is obligated to execute the ecological balance with the purpose of establishing the obligations regarding rehabilitation of the environment in the impact area of the said activity. The competent CEPI revises the ecological balance, establishes the compliance programme, and the former owner negotiates with the new owner the acceptance of earlier obligations and the compensations to which it is entitled by application of ecological protection and reconstruction measures.

In 2001 the process of issuing authorisation documents at the level of a CEPI was realised by the issuance of 42,656 documents, of which 13,651 were environment agreements (32 percent) and 29,005 environment permits (68 percent).

As far as the type of activity is concerned, the most important part is composed of low-impact activities (services and trading, public alimentation, public utilities) representing 60 percent of the total; average-impact activities (small industry, gas stations) constitute 20 percent and major-impact activities (big industrial units) represent approximately 10 percent.

Information regarding the 'Single Office'

The Directive for Permitting and Certification participated in the elaboration of Governmental Decision No. 625/2001 as well as in the elaboration of the Protocol Project signed (on the basis of Article 5, Paragraph 2 of Emergency Governmental Ordinance No. 76/2001) between the MWEP and the National Chamber of Commerce and Industry of Romania, and in elaboration of the application methodology conceived as an integrant part of the protocol.

According to provisions of the environmental protection legislation, the authorisation competency for the economic agents involved in commercial activities belongs to the CEPIs. For operation authorisation of commercial entities by the "Single Office" within the county chambers of commerce, representatives of the Service for Authorisation Agreements and Permits of each CEPI were designated to take part in the authorisation process according to stipulations of the aforementioned legal acts.

Regarding implementation of the new legislation regarding operation authorisation of commercial agents, the Direction for Permitting and Certification of the MWEP elaborated "The instructions regarding application of the procedure for regulation of activities with an impact on the environment" within the "Single Office" that contain the classification on any type of activity in the CAEN (national classification of economic activities) code to which authorisation procedure applies as follows:

- Annex 1 comprises the activities for which the regulatory act is not required (company headquarters);
- Annex 2 contains the low-impact activities for which simplified authorisation procedure is applied and the regulatory act is issued within 20 days; and
- Annex 3 includes those activities with a significant impact on the environment, as those mentioned in Annex 2 of the Environment Protection Law and for which the procedure stipulated in the Ministerial Order No. 125/1996 is applied.

The requirements in the permitting process are as follows:

- improve advisory opportunity/capability in order to improve actual capability of employees; and
- manpower increase in checking of permits. The actual legislation is too permissive.

Compliance Control and Compliance Promotion

The control of economic activities and application of the provisions of the legislation in force are performed on the basis of the stipulations of Ministerial Order No. 541/2000 regarding "technical norms pertaining to the organisation and operation of inspection and control activities in the field of environmental protection," The Directive for the Ecological Control and Monitoring and the CEPIs enforce this order. These norms are issued according to Article 64, letters (d), (e) and (m) and Article 68, Paragraph 1 of Environment Protection Law No. 137/1995 (EPL) by the MWEP.

These norms establish a unitarily technical and methodological framework regarding the exercising of inspection competencies in the field of environmental protection and ensure reinforcement of the institutional framework on environmental protection inspection.

Inspection is compulsory for economic and social activities having an impact on the environment as clas-

sified by the norm mentioned previously. Accredited environment inspectors exercise the inspection. For those economic agents that could potentially have a negative impact on the environment, the inspection activity is also compulsory after their closing, so that the owner would comply with the rehabilitation requirements of the respective area. This type of inspection will be performed periodically at intervals that may vary, depending of the economic agent and its impact on the environment. Activities that could lead to high-impact effects in the event of system failures, accidental pollution, calamities and any other significant pollution of the environment take highest priority.

Due to the fact that in recent years an increase of accidental pollution cases and severe breaches of the environment law have been observed with no opportunities to establish the exact responsibility of legal or private persons, there is an ongoing project of Government Decision for the Establishment of the Environment Guard (EG). By creating this structure, the government intends to increase its efficiency in the fight against offences committed in the environmental field.

The EG, a control body with a special status and established following the reorganisation of the ecological control departments at a central and local level, will have a General Commissioner's Office of the EG by transforming the Directorate for Ecological Control within the MWEP and County Commissioner's Offices of the EG by transforming the ecological inspection services within the CEPIs. The organisation of the EG will take place in the next three months. The control personnel will have a special uniform and will be armed. The EG will have the following competencies:

- controls installations with a major impact on the environment;
- performs technical inspections of the economic agents that carry out activities subjected to the environmental impact assessment procedure, according to the law;
- follows up the execution of environmental protection investment at all stages;
- participates in interventions to remove or minimise the effects of environmental pollution, as well as activity to prevent accidental pollution;
- controls and records breaches of environment-related laws and regulations, and applies financial sanctions as stipulated by law;
- informs penal authorities and cooperates with the police in establishing facts that constitute a punishable offence;
- In case of accidents or ecological disasters with a cross-border effect, cooperates with the specialised structures in the neighbouring countries for prevention, diminution and elimination of the effects.

Planned compliance promotion activities are incorporated into enforcement procedures.

Ad hoc promotion activities are available at a thematic inspection site.

Annual compulsory compliance checking is used to evaluate the level of conformation, in the permitting and privatisation process.

Compulsory follow-up actions are taken after every site inspection.

The compliance checking covers all environmental fields. Noise is covered by the regional health inspectorates, and radioactivity fields are covered by the National Commission for Nuclear Activity Control — a department of the MWEP.

The needs for compliance checking and promotion are as follows:

- development of the compliance-checking procedures for major industrial activities;
- enhancement of communication skills for cooperation with other authorities;
- development of compliance-promotion strategies;
- development of a code of conduct for compliance checking/promotion;
- development of a compliance-response strategy.

Enforcement Procedures

Responsibilities

Responsibilities of inspection and control departments within CEPIs are as follows:

- elaborate the inspection policy at the CEPI level, ensuring the framework for performance of inspection activities by establishing objectives, tasks and action performance indicators;
- carry out inspection activities on the territory of the county and of Bucharest, respectively of the economic agents that operate activities having an impact on the environment, mainly of those economic agents having a significant impact on the environment as defined by the present regulation;
- organise control (in cooperation with the personnel of specialised services and exercise), over the way in which the legal dispositions, norms and standards are enforced regarding:
  - atmosphere protection;
  - protection of surface and underground waters and aquatic ecosystems;
  - protection of the soil and land ecosystems;
  - protection of nature, landscape and natural habi-

tats, preservation of biodiversity, of natural fauna and flora;

- exploitation of biological resources of wild fauna and flora, including exploitation of the fishing in natural waters and hunting;
- regime of protected areas and monuments of nature;
- protection of human habitats;
- regime of hazardous chemicals and waste;
- regime of pesticides and chemical fertilisers; and
- other aspects that fall within the competency of the inspection and control services as stipulated by law.

In addition to these tasks, CEPIs also:

- control how legal dispositions in force regarding authorisation of social and economic activities having an impact on the environment; are respected and apply the penalties provided by law;
- control how the provision of the authorisation documents (permits, agreements, authorisations, and others) issued by the CEPI are respected and apply the penalties as stipulated by law;
- control how the provisions of compliance programmes and environment-related obligations established by the privatisation procedure, change of ownership or cessation of activity of social and economic agents are respected and apply the penalties stipulated by the law;
- control how legal and private persons operating environment-impact activities comply with legal dispositions regarding the authorisation procedures and apply the penalties as stipulated by law;
- control how land and urban improvement plans are respected and approved according to the law, and apply measures as stipulated by law;
- control the taking of special measures in regard to economic agents subject to high risks of negative impact on the environment, including special measures to avoid ecological accidents and to reduce the effects of natural disasters, and apply penalties as stipulated by law;
- organise and exercise control regarding import and export operations for products, goods and other materials with a special trading regime according to international law and cooperate to this end with all competent regional authorities, including customs and apply measures as stipulated by law;
- deal with all complaints in connection with breaching of environment protection law;
- advise the economic agents that operate social and economic activities with a negative impact on the environment with a view to improving their environment-related performance, prevent environment al pollution and maintain and improve the quality of the environment and rehabilitate polluted areas;
- participate with other departments within the CEPI in the elaboration of local environment policy and improve the application of environmental law and regulations, mainly in regard to economic agents having a significant impact on the environment;
- cooperate with the other departments within the CEPI in the issuing of authorisation documents, as well as in the elaboration of compliance programmes for existing activities that do not meet the authorisation requirements, and monitor implementation of the measures established in the compliance programmes and the meeting of set deadlines.

The inspection service also recommends management measures to the CEPI to improve cooperation with other departments of the CEPI and participates in the elaboration of concrete action plans to correlate regulation, inspection and monitoring activities in order to improve the institutional capacity of the CEPI.

The CEPI applies measures stipulated by law for disobeying of legal dispositions, establishes the facts constituting offences and applies financial penalties or, if required, informs the law-enforcement penal authorities as stipulated by law.

The CEPI informs the MWEP on the specific regulations, guides or technical norms that need to be developed, and looks into personnel-training requirements for specific problems, on a case-by-case basis.

In exercising their competencies according to the law, the inspection services cooperate with other inspection and control bodies of local and central authorities, NGOs, private or legal persons, and may initiate or participate in common actions with all these institutions and organisations with the purpose of improving environment inspection activities, pollution prevention, adherence to environmental law and improvement of environmental sectors.

As in exercising their competencies, the inspection services cooperate with all subordinate regional units, coordinated by or under the authority of the MWEP. Other inspection and control activities are carried out as stipulated by law, and take corresponding measures.

Economic agents and activities subject to inspection

Newly established economic agents and activities

For newly established economic agents and/or activities regulated by an environmental agreement, inspection is compulsory for the entire duration of objective execution until being put into service (including the test period of technological equipment) so that the holder meets all requirements of the environmental agreement and of other pre-agreement documents taken into account when issuing the authorisation document.

Existing economic agents and/or activities

For those activities and/or economic agents that do not hold an environment authorisation inspection, it is compulsory to facilitate the procurement of environmental authorisation:

- for those activities and/or economic agents that do hold an environmental authorisation, inspection is compulsory for the duration of the economic agent's operation, the control being carried out on the basis of environmental authorisation and legal norms and standards;
- for authorised economic agents following a compliance programme, the inspection is required to verify the deadlines imposed in the programme;
- upon cessation of activities generating a negative impact on the environment when the former owner has drafted the environment balance and/or negotiated with the CEPI the compliance programme to establish the obligations regarding the rehabilitation of environment quality in the impact area, inspection is then compulsory to verify that the measures stipulated in the programme have been taken and deadlines met.

The economic agents and activities having an impact on the environment are classified as follows:

- Type-A economic agents — those economic agents that carry out one or more activities with significant impact on the environment;
- Type-B economic agents — those economic agents that do not fall within the A-category and which are identified by each CEPI on the basis of the selection criteria and could have a significant impact on the environment.

The above classification can be modified, taking into account possible changes in a specific activity.

Types of inspection

General inspection for authorisation

A general inspection for authorisation (GIA) is applied to economic agents that have submitted an authorisation application, before the issuance of the authorisation document or on updating of an environment authorisation, being compulsory for those economic agents having a significant impact on the environment. The GIA is performed by a team of representatives of authorisation departments and representatives of inspection departments. The goals of the authorisation inspection are as follows:

- determine the degree of compliance with the legislation in force;
- verify the accuracy of the information presented by the applicant in the authorisation documentation;
- control sampling modalities and monitoring activities of the applicant, if a self-monitoring system exists; and
- identify required measures to be taken and negotiated in the compliance programme for those units that do not meet the authorisation requirements.

Diagnosis inspection

A diagnosis inspection (DI) aims to identify the causes of non-compliance of the economic agent to various stipulations in the environment protection legislation and/or to advise the economic or social agent on the existence of failures to comply due to negligence in the operation and maintenance of industrial equipment. The DI can be performed upon the request of the economic agent.

Compliance assessment inspection

A compliance assessment inspection (CAI) is performed by economic agents that operate an environment-authorised activity and ensure a minimum degree of self-monitoring of emissions and/or are monitored by the laboratories of other entities or CEPI. The CAI is performed for these activities having a significant impact on the environment. The goals of the CAI are as follows:

- verify how the economic agent complies with the requirements of the environment authorisation, including the monitoring requirements;
- verify the stages of compliance measures imposed in the compliance programmes for the units that do not meet the authorisation requirements; and
- visit and assess activities in the pre purification/purification stations, laboratories, technological processes generating significant amounts of waste, quality of effluent and emissaries including the activities in connection with rehabilitation of polluted areas.

General inspection

The general inspection (GI) is specific to compliance assessment taking place after the issuance of environmental authorisation to verify those units having a low

impact on the environment. The GI is performed by one individual to verify the compliance of the activity with the provisions of the environment authorisation and with the requirements of environment-related legislation.

Compliance assessment inspection with sampling

The compliance assessment inspection with sampling (CAIS) includes sample taking. It is performed for economic agents holding an environmental authorisation that may or may not have self-monitoring emission systems. In addition to having goals similar to those at the CAI, the CAIS is also intended to perform the following:

- verify the accuracy of data reported to the CEPI and/or for the monitoring programme, on a case-by-case basis;
- verify whether emissions fall within the permissible concentration limits as stipulated by law;
- identify whether environmental authorisation must be renewed (if new pollution limits are enforced);
- access the possible need to modify the pollutant monitoring frequency established in the environment authorisation and to propose re-evaluation if necessary.

This type of inspection is performed in regard to those economic agents having a significant impact on the environment. If the inspection departments are not equipped with the necessary technology to assess the pollutants on site, the CAIS will be performed together with the representatives of the CEPI laboratory or other licensed laboratories that use adequate equipment and methods according to the legal norms and standards in force.

Toxic and hazardous pollutants assessment inspection

The toxic and hazardous pollutants assessment inspection is intended to identify and verify potential sources of toxic and hazardous emissions or waste, as well as the management of such substances. It can be performed upon request from the economic agent.

Environment performance assessment inspection

The environment performance assessment inspection is intended to advise the economic agent on the improvement of environment-related performance by identification of technological process deficiencies and of those sectors where management improvement is required, as well as to solve operation- and maintenance problems, prevent and reduce waste disposal at the source and to increase productivity and efficiency of the economic agent. It can be performed upon request from the economic agent.

Thematic inspection

The thematic inspection is intended to assess the necessity to elaborate specific assessments or reports required for better information of the MWEP, public opinion or other local public administration authorities and focuses on certain sectors of activity, substances and/or products, environmental sectors, etc.

Inspection in the event of accidental pollution

Inspection in the event of accidental pollution is performed when accidental pollution that may lead to a change of physical, chemical, biological or bacteriological characteristics of the environmental sectors occur due to accidents, system failures or other similar causes as a result of human error, negligence or natural calamities. Accidental pollution usually has high intensity and short duration. The CEPI will immediately inform the MWEP if such pollution cases occur. The model for the information report is provided.

Follow-up inspection

Follow-up inspection is performed after another type of inspection, mainly a CAI or CAIS, in order to control the taking of measures imposed during previous inspections, and sometimes to assess compliance for some sectors that were not verified during previous inspections.

Penalty system

The penalty system is objective and independent. If more than one perpetrator is involved there is joint responsibility. In the case of activities generating major risks damage, insurance is compulsory. The violation of this law implies civil, financial or penal liability, depending on the case. The observation of offences and application of penalties is carried out by the personnel empowered by the MWEP, police officers, empowered personnel of the city and county administration and by the empowered personnel of the Ministry of National Defence, according to their varios legal competencies. A complaint against the sanction can be filed within 30 days from notification, and the competent court will deal with it.

If someone is charged with endangering the health of a large number of people, or has caused significant material damage, the penalty could be a three-to-10-year detention period and denial of certain civil rights; and in the event of human casualties or important damages to the national economy the penalty could be a seven-to-20-year detention and denial of certain civil rights. Any attempt to commit such crimes is also punishable. Penal authorities, according to legal competencies, perform observation and investigation of offences. NGOs have the right to enforce justice for the preservation of the environment, regardless of the prejudiced party.

To conclude, the executive powers of the CEPI in enforcement are as follows:

- execute site inspections and follow annual planning of enforcement actions;
- unannounced visits similar to the thematic inspection;
- close an entire factory or part of it for non-compliance;
- claim penalties and collect fines;
- call in police assistance as needed;
- check accounting and bookkeeping – just environmental investigation, and waste statistics;
- file administrative charges; and
- file criminal charges.

The needs in executive powers are as follows:

- technical training for enforcement-office staff and legal training for all CEPI employees.

Environment Inspectorate Organisation, Human Resources, Management and Training

As mentioned above, Romania has 42 CEPIs employing 400 inspectors.

In conformity with the last decision of the MWEP (February 8, 2002) every inspector must spend 94 days per year on site visits to economic agents having a major impact on the environment, and 26 days per year on site visits to other economic agents.

The yearly regular training of management is provided to the amount of three to four days per inspector.

The average duration of staff training is three weeks per year.

The institutional capability of the CEPI system was improved by project No. ROM–101, started in 1998, and finalised with the support of the European Union. The total financing totalled EUR 315,000.

The project had the following objectives:

- assessment of the institutional capacity for development of the approximation process;
- analysis and identification of the main differences between EU legislation and national legislation;
- cost assessment for the approximation process;
- development of a priority system for the MWEP in the approximation process; and
- establishment of a three-year approximation programme.

In 1998 the EU also financed another project No. ROM–102 "Elaboration of the Programme for Implementation in Romania of the Environment Legislation Approximation." This project continued to develop the analytical activity initiated by project No. ROM-101 to prepare and consolidate the basis of the Programme for Adoption of Environmental Acquis Communitaire.

The main components of the project were as follows:

- support for development of a detailed approximation programme;
- consolidation of administrative capacity for the approximation process;
- ensuring a preparation programme for the approximation process;
- support for the development of institutional coordination mechanisms.

The MWEP participated in the creation of the Network for the Implementation and Enforcement of Environmental Law for Accession Countries (AC-IMPEL) at the 1998 Tallinn summit of candidate countries. Romania has been an active participant of this network ever since.

In the framework of institutional reform in 2001 the actions of the MWEP were oriented towards the restructuring and reorganisation of the regional units.

The predictable results are:

- better compatibility between the ministry structures and CEPIs;
- better coordination regarding coverage of all issues in the territory;
- reduction of operating costs of the local structures;
- opportunity to an integrated information system and formation of databases to help in the decision-making process; and
- integration within the system of all subordinate units and better operation of the MWEP with the accomplishment of its tasks and fulfillment of its responsibilities.

At present, the RO 9804 PHARE Project "Enforcement of Institutional and Administrative Environmental Policy- Coordination Capacity According to Community *Acquis*" is in progress. The programme has three specific components:

- enforcement of institutional capacity;
- support of local and regional development; and
- provision of information and increase of public opinion awareness.

Based on the new DANCEE strategy and on the "Agreement between the Ministry of Waters and Environmental Protection in Romania and the Ministry of Environment and Energy of the Kingdom of Denmark Regarding Cooperation in the Field of Environmental

Protection," signed in 2000, this new country programme will constitute the foundation of environment-related actions in the next three years, and will ensure the achievement of all proposed objectives financially supported by the Danish Government. The priority directions of the Danish assistance are the following:

- improvement of public-administration capacity on environment-related issues at both central and local levels;
- improvement of air quality and control of industrial pollution;
- improvement of water quality and water-supply systems;
- waste management;
- natural resources management;
- enforcement of institutional capacity of companies and training of managers responsible for projects financed with Danish support;
- assistance for public participation in the decision-making process in the field of environmental protection;
- increasing responsibility of the private sector and its involvement in the environmental protection process.

The projects of national interest proposed for the 2002–2004 period are as follows:

- a financial strategy regarding implementation of community *acquis* in the field of air quality and industrial pollution control; and
- assistance in the development of a reference laboratory for monitoring of air quality.

Environmental Inspection in Practice

According to conformity with the last decision of the MWEP to improve the activity of inspections in regard to environmental protection, time management will be carried out as follows: The number of inspection days per inspector is 94 (78 percent) to A-type economic agents (45 percent) per year. Twenty-six inspection days per inspector per year will be allocated to B-type economic agents. The time allocated for every site inspection at major pollution sources will be 1.5 day per inspector. Four days per week will be allocated for site inspection and one day to administrative work. (See Annex 1.)

In 2001 the inspectors performed 52,656 controls of the economic agents having an impact on the environment. For lack of compliance with the environment legislation the inspectors imposed 718 penalties with a total value of ROL 6,706 million (EUR 204,120) and contributed to the invitation of 28 penal cases for severe infringements of the law.

Additionally, the statistics are as follows:

- percentage of court cases/visits (approximately 15 court cases per year);
- percentage reports/visits (every site inspection is completed with an inspection report);
- percentage complaint visits/total (1-2 visits per year); and
- percentage of successful court cases (40 percent);

The need for performance indicators are as follows:

- development of indicators for evaluation of the performance of inspection activity;
- training in laws, including main legislation and specific (sector) legislation;
- training in site visits in order to develop investigative skills.

Data Storage and Retrieval Systems

According to provisions of the Law of Environmental Protection No. 137/1995, publication of the quality of environmental sectors and drawing up of reports on the state of the environment and the centralisation of data within the CEPIs is the following:

- daily regime — when pollution exceeds permissible limits (for water, air and soil measured values), events with significant impact on environment occur, in case of accidental pollution and other unusual events;
- monthly regime — in the form of a report on the state of the environment at a county level (physical — geographical parameters, economic parameters, emissions, maximum concentration levels, radioactivity, soil quality, toxic substance regime, waste, degraded areas, biodiversity and protected areas, investment); and
- annual regime — in the form of a synthesis report regarding environmental status, having the same structure as the monthly report.

For the quality of surface waters, lakes, underground waters and wastewaters including saprobiologic and bacteriologic characterisation, data from the regional units of the National Water Company and from the database regarding monitoring of eutrophication phenomenon are used.

Data on soil quality are provided by the Office for Soil Protection and Amelioration including data on soil degradation; a limited number of analyses of soil quality are performed by CEPI.

There is an electronic database of monitoring services (sampling, state of environment, annual reports of

environment on quality, inspection site report, and other specific problems).

There is a database of industrial and urban waste.

The needs for data storage and retrieval are as follows:

- software for electronic storage, and to improve capacity of actual logistics;
- training in the use of databases; and
- training in computer hardware.

Monitoring and Sampling, Access to Information

Monitoring

Monitoring of environmental sectors is performed at the CEPI level (for monitoring of emissions, the Corinnair method was used in the last two years for emission computation; the Corinnair method is used on a national level for the annual inventory of atmospheric emissions resulting from the main economic agent, and this action was finalised with a mathematic model, the purpose of which was the redesigning of the county and national environmental sectors monitoring network). Monitoring of pollutants at the source is not carried out due to the lack of necessary equipment. According to the EPL, polluters are obliged to self-monitor their emissions.

Monitoring of pollutants at the source is not carried out due to the lack of required the necessary equipment. According to the EPL this polluters are obliged to self-monitor their emissions, but level of self-monitoring is very low.

Counties are involved in the monitoring system for the next indicators. For example, in Hunedoara county, for the determination of air quality (gas pollutants, aerosols, sedimentable powders, quality of rain and noise level) the data obtained from the 151 monitoring points of CEPI Deva is processed. At the county level, the monitoring points are structured: nitrogen dioxide=15 pts., sulphur dioxide=13 pts., phenols=2 pts., ammonia=3 pts., acidity=6 pts., sedimentable powders with monthly sample taking=70 pts (and with weekly sample-taking=12 pts.) and rain-water quality=14 pts.

For water and soil quality, information is derived from 2 sources: self–monitoring for controls section (National Water Company for every 12 major river basins) or county offices for soil protection, and CEPI sampling (periodic planned testing).

Public access to information

Access by the general public to information is accomplished on the basis of Law No. 86/2000 ratifying the Aarhus Convention —— regarding public access to environmental information — to contribute to the right of every person from present to future generations to live in a decent and safe environment. The law grants the right of access to environment-related information, the participation of the public in the decision-making process and environment-related access to justice.

The CEPI keeps an inspection report registry where each report is recorded in chronological order. The number of the report is given an order number in the registry. The registry and the inspection reports are made available to the public (with the exception of the Annexes 2 to 8) and can be consulted by interested parties — representatives of other regulatory bodies, NGOs, etc. at the CEPI headquarter following an published timetable.

Upon request the CEPI puts at the disposal of interested parties, any document or data obtained or resulting from:

- inspection of economic agents with the purpose of environment authorisation or verification of compliance with environment-related legislation or previously issued authorisation documents, and/or advising the economic agent with the purpose of improving environment-related performances; and
- measures established following inspection, the way in which these measures are taken and whether deadlines are met.

The CEPI informs the public using the mass media at least two times a year on any information regarding:

- environment status, taking into account the quality of all environmental sectors and their interaction; and
- local environment policy, plans and programmes developed by the inspectorate, as well as the most important measures for prevention, maintenance or improvement of the quality of environmental sectors, and the measures taken to rehabilitate pollution affected areas.

Data that could negatively affect the following is not made public:

- international relations, national or public security;
- the course of justice, the right of persons to a fair trial or the right of a public authority to conduct a penal or disciplinary investigation;
- confidentiality of commercial and industrial information, when the law to protect a legitimate economic interest stipulates confidential status. In this context, the information regarding emissions having significant impact on the environment will be released to the public; and
- intellectual ownership rights.

The CEPI encourages economic agents that operate activities having a significant impact on the environment to periodically inform the public of the impact of their activities and products the environment and of the measures taken to improve their environment related performance, of their voluntary actions to reduce pollution, of the environment assessment to identify sensitive issues and their activities, etc.

The needs for monitoring and sampling are as follows:

- training in sampling techniques (for monitoring offices), and
- use of small monitoring equipment (for inspectors).

Compliance Assessment

The process of compliance assessment is regulated by Ministerial Order No. 278 issued according to the provisions of Article 12, Paragraph 12, and Article 64 (section 'f') of the EPL.

This regulation establishes the procedure of certified specialised units, legal and private persons to perform assessments concerning the impact on the environment, and ecological balances according to the provisions of the EPL.

In certain circumstances the certificate issued to a certain entity can be withdrawn during its two-year period of valididity. The MWEP, depending on the case, decides these exceptional circumstances, but they may include one or more of the following situations:

- performing an Environmental Impact Assessment Study or an Ecological Balance Evaluation that has been rejected on more than two occasions, and/or when an important number of Environmental Impact Assessment Studies performed by the certificate have not been finalised with the issuance of authorisation documents;
- performing an Environmental Impact Assessment Study or an Ecological Balance Evaluation outside the realm of expertise of the certificated party;
- when one of the parties has violated the confidentiality clause or used data from the Environmental Impact Assessment Study or an Ecological Balance Evaluation to obtain other advantages;
- when performance of a certificated Environmental Impact Assessment Study or an Ecological Balance Evaluation does not comply with the Romanian legislation in force.

The main criteria for the compliance assessment are as follows:

- self-monitoring data from industrial activities (internal audit, although this practice is applied by just few polluters);
- internal investigations according to the inspection action plan;
- complaints, evaluation of environment performances; and
- investigations by themes and thematic inspections.

Improved compliance assessment requires an enhancement of compliance indicators.

Enforcement Performance and Procedures for Assessing Compliance

The report on the performance of the inspection activities carried out by CEPI is issued on an annual basis to the MWEP. The personnel empowered for specific fields have the same obligation.

The annual inspection plan to be forwarded to MWEP includes the following:

- the list of Type-A economic agents approved by the MWEP;
- the list of Type-B economic agents approved by the MWEP;
- the inspection plan including the number of planned inspections and types of activities to be performed for each Type-A economic agent and priority activities for Type-B economic agents; and
- a short description of planned activities included in the inspection plan.

An annual report regarding the inspection activity forwarded to the MWEP with the purpose of comparing the planned and real use of resources within the inspection departments includes the following:

- information regarding the status of compliance with the provisions of legislation in force of those economic agents having a significant impact on the environment, including the presentation of those inspections that have led to the pollutants emission reduction;
- information on the most efficient inspections that have led to significant improvement in the quality of environmental sectors;
- status of penalties and violations;
- proposals to improve inspection activities: supplemental training of personnel and/or other aspects specific to environment protection, elaboration of guidebooks, manuals, etc.

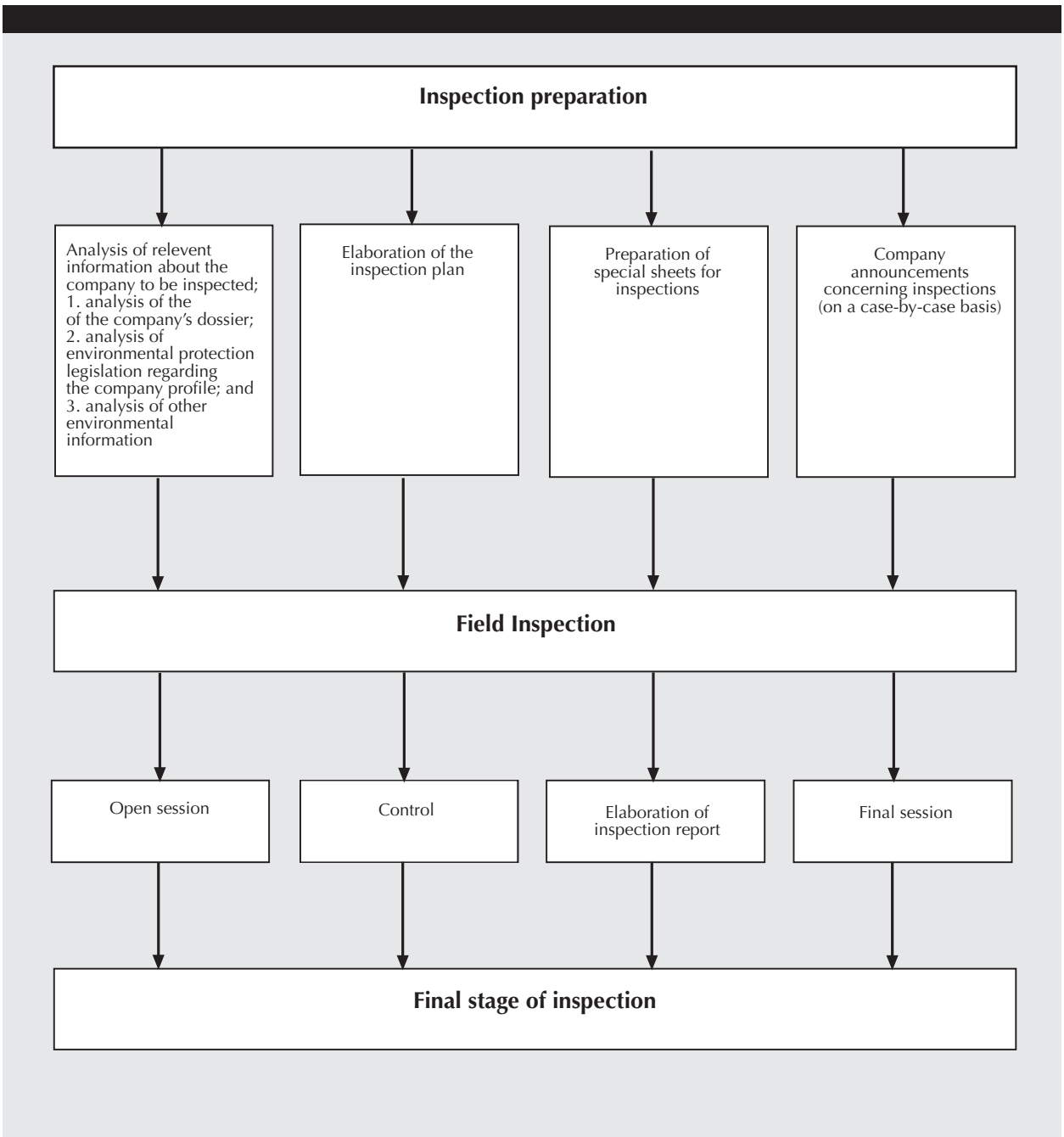
The major tools for enforcement activities and actions are as follows:

- the number of fines per year;
- the amount of fines collected in euros;

- the number of major pollution sources inspected and fines applied;
- the number of successful court cases;
- improving the state of the environment.

Enforcement indicators and reporting capabilities could be improved through credibility-testing "peer reviews."

Annex 1: **Chart of Environmental Inspection Visits**



Annex 2: **Law on Environmental Protection**

Law No. 137/December 29, 1995 - "Law on Environmental Protection" - published in the *Official Gazette of Romania*, Part I, No. 304/December 30, 1995, republished in 2000 in the *Official Gazette of Romania,* Part I, No. 70/February 17, 2000

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General principles and provisions

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Appendix No. 1

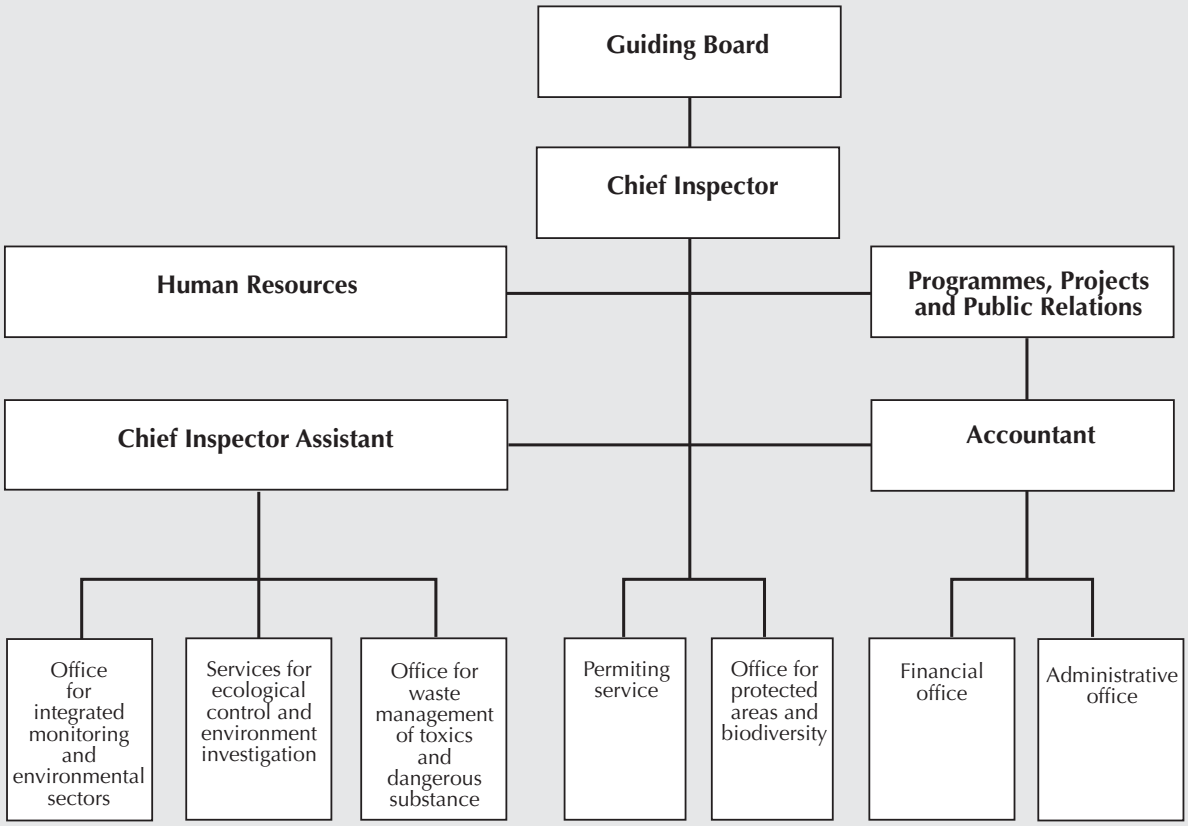
The meaning of some terms to the interpretation of the present law

Appendix No. 2

List with activities, which are subject to the procedure for the environmental impact assessment for the issuing of the environmental agreement and/or permit

1. Transports
2. Energy
3. Hydro-Technical construction
4. Waste and packages removal
5. National defence
6. Sports, tourism, recreation
7. Industry
8. Other works or installations

Annex 3: **Diagram of County Environmental Inspectorate**



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Country Profile:
Serbia and Montenegro

Republic of Serbia

Prepared by
Zeljko Pantelic

February 2002

Republic of Montenegro

Prepared by
Tomislav Andjelic

February 2002

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Country Profile: **Republic of Serbia**

Administration

The Law on Ministries stipulates that in the Republic of Serbia, the Directorate for Environmental Protection, an administrative body in the Ministry of Health and Environmental Protection, is in charge of state administration related to the following:

- the system of environmental protection and promotion;
- conservation of nature;
- establishing and implementing measures to conserve natural entities;
- protection of natural resources from pollution;
- establishing environmentally safe conditions for construction of new facilities in regions of special interest for the republic;
- manufacturing and utilising radioactive material and disposing of it;
- tasks related to ionising and non-ionising radiation;
- protection from noise and vibrations;
- protection from toxic and dangerous materials in production;
- waste disposal;
- inspection supervision in the area of environmental protection;
- programming and coordinating international collaboration in the field of environmental protection; and
- other tasks defined by law.

Serbia has no environmental protection agency. No such institution is stipulated by the provisions of the Environmental Protection Law (*Official Gazette RS,* Vol. 66/1991).

Intensive activity is in progress to set up a new ministry of natural resources and environment, and the draft Law on Environmental Protection System has been prepared. The new ministry is expected to materialise by the end of 2002. The draft law also calls for the establishment of an environmental protection agency.

The Environmental Protection Inspectorate operates on the following two levels:

- municipal level: most towns (unfortunately not all) have municipal inspectors with fairly limited authority, i.e. they control polluters for whom the municipality issues licenses in the areas of air protection and protection from noise; and
- republican level: the inspection service is within the Directorate for Environmental Protection of Serbia.

The republican inspectors for environmental protection are authorised to control implementation of regulations concerning environmental protection as defined by Articles 91-100 of the Environmental Protection Law, Articles 25 and 26 of the Law on National Parks (*Official Gazette RS* Vol. 39 and 4/1993) and Articles 25-27 of the Waste Management Law (*Official Gazette RS* Vol. 25/1996).

The Environmental Protection Law relegates the following duties to the republican inspectors:

- Article 91 declares that the monitoring of this law's implementation and pursuant regulations is carried out by the ministry, unless stipulated otherwise, and that monitoring of the measures concerning air pollution, conservation of protected natural resources, noise pollution, hazardous materials and ionising radiation is conducted by the environmental protection inspector.
- Article 92 declares that the republican minister of environmental protection is in charge of inspectors' monitoring of implementation of measures for air pollution by installations whose licenses are issued by republican ministries.
- Article 93 outlines duties for inspectors in the field of air protection.
- Article 94 stipulates that the supervision of implementation of the measures pertaining to natural resource protection is carried out by the republican inspector for environmental protection, while inspection supervision of the trade of endangered wild animals and herbs, and products made from these things, is carried out by the ministry in charge of trade.
- Article 95 defines competence and authority of the republican inspector in the monitoring of conservation of protected natural resources.

- Article 96 authorises municipal and town inspectors to inspect and monitor implementation of measures concerning noise in residential, business and utility facilities.
- Article 97 defines the authority and duties of inspectors for the monitoring of measures for protection from noise.
- Article 98 defines authority and duties of inspectors for the monitoring of measures related to ionising radiation (which has not been implemented since adoption of the Federal Law on Ionising Radiation, which transferred the authority in this field to the federal level).
- Article 99 declares that the Ministry of Health should monitor the implementation of measures for protection from ionising radiation in health care institutions that use sources of ionising radiation in diagnostic and therapeutic purposes.
- Article 100 sets out the authority and duties of inspectors related to protection against dangerous materials (except in the production and trade of explosives, inflammable liquids and gases).

Several regulations have been derived from these main laws:

- the Environmental Protection Law;
- the Law on National Parks; and
- the Law on Waste Disposal.

An inspectorate with a staff of 39 republican inspectors is part of the Directorate for Environmental Protection of Serbia (Annex 4). The inspectors work in six departments (a seventh department in Pristina is currently out of commission). Each department covers several districts and has inspectors who work in satellite offices in some towns, particularly in major industrial centres. Altogether, the inspectors have offices in 16 towns, (Annex 2).

The Republican Inspectorate is headed by the inspectorate head, who is directly responsible to the director of the Directorate for Environmental Protection of Serbia. Each department is headed by a department head who delegates duties, performs the most complex tasks of inspection monitoring, develops plans and writes reports. The department head is responsible directly to the inspectorate head.

The inspectorate head organises the operation of the inspectorate, develops plans, writes reports, and participates in all activities needed for coordination of responses to chemical accidents.

The inspectorate helps develop laws and regulations (new ones and modifications of existing ones), usually through the participation of the inspectorate head, department heads or some inspectors in specialised commissions.

All republican inspectors have the same competence and authority, but in practice they are divided into two groups: technical inspectors who monitor polluters and forest/bio-inspectors who monitor conservation of natural resources. Some exceptions to this principle have been made in practice.

The inspectors collaborate with departments in the Directorate for Environmental Protection of Serbia, usually with lawyers, experts in certain fields, and most of all with groups of experts that evaluate studies of the impacts of industry on the environment.

The needs at the administrative level are as follows:

- a new law on an protection system;
- a ministry for natural resources and environmental protection;
- an environmental protection agency; and
- a framework law on environmental protection systems with specific sectoral laws covering air pollution, water pollution, waste management, soil pollution, etc. (All are expected in the near future.)

Inspectorate-Related Institutions

The Inspectorate of the Directorate for Environmental Protection of Serbia collaborates with other inspection services (water resource management, mining, agricultural, veterinary, sanitary, market, fire fighting, civil engineering, etc.). All have some dealings with the Environmental Protection Inspectorate.

The Ministry of Agriculture, Forestry and Water Resource Management performs duties of public administration related to: conservation utilisation and promotion of agricultural land, forests and waters, fauna and flora, water resource management and water supply (the last category does not include water distribution). The distribution of authority has proved inadequate, and work is underway to amend the legislation and make the Republican Environmental Protection Inspectorate fully competent in this area.

The Ministry of Mining and Energy performs duties of public administration related to mining, the oil industry, geological investigations and exploitation of mineral resources. The ministry is charged with identification and certification of classified reserve mineral resources and underground waters. The mining inspectorate collaborates with the Environmental Protection Inspectorate on problems with quarries, pits, etc.

The Sanitary Inspectorate operates within the Ministry of Health and Environmental Protection. The

Sanitary Inspectorate usually responds to chemical accidents with the Environmental Protection Inspectorate, particularly when the water supply has been affected.

The Market Inspectorate operates within the Ministry of Trade, Tourism and Services.

Pursuant to the Environmental Protection Law, the Market Inspectorate looks after the trading of protected animals and plants. If a republican inspector discovers a violation in this field during his regular inspections, he/she must immediately inform the market inspector, who then applies all measures in his or her competence. In practice, good coordination between these two inspectorates has never been established. The notification of market inspection is also important when the polluter pursues an unregistered activity (since the Environmental Protection Law does not stipulate the possibility of sanctions against a natural entity, but only against a legal entity) and when the market inspector makes the polluter register his activity. It is the only way to manage the environmental protection problem.

The Ministry of Interior is in charge of traffic safety on the roads; production and trading of explosive materials, inflammable liquids and gases; and fire protection. The Fire-Fighting Inspectorate (part of the police force) monitors chemical plants, and has specially trained brigades that respond to chemical accidents.

The Ministry of City Planning and Building performs the job of public administration related to the following:

- city and spatial planning;
- preparation, design and implementation of the spatial plan of the republic;
- preparation of spatial plans important for the republic;
- specifying the requirements for building facilities in regions recognised as areas of special interest, except for facilities producing and/or disposing of radioactive materials.

The Building Inspectorate prohibits the construction of buildings without proper licenses or permits. For projects that require an analysis of environmental impact, the Ministry of Health and Environmental Protection is the only competent body for the issuance of approval thereof.

The Republican Institute of Hydrometeorology performs systematic meteorological, agrometeorological and hydrological measurements. It is in charge of observation, aggregation and data processing, as well as the monitoring, analysis and forecast of changes in weather and waters. It monitors air pollution and the quantity and quality of water.

The Federal Institute of Hydrometeorology is very important in cases of excessive pollution of waters and the early forecast of such pollution.

The Nature Conservation Institute of the Republic of Serbia is a professional organisation that handles tasks related to the conservation of natural resources. The inspectors for protected natural resources do field work with experts of this institute quite frequently.

The Recycling Agency has been set up pursuant to the Waste Management Law. The agency carries out:

- professional activities related to the monitoring and control of utilisation of secondary raw materials;
- market research of secondary raw materials;
- record keeping on available and required amounts of secondary raw materials and a database on secondary raw materials;
- programmes, studies and analyses of technical and technological opportunities for the usage of secondary raw materials;
- the location of facilities for disposal, storage and recycling;
- categorisation of waste;
- issuance of guidelines on whether to classify waste as secondary raw material or garbage; and
- the introduction of new technologies and recycling procedures.

The law provides opportunities for this agency to provide public education on recycling. It performs other tasks in collaboration with domestic and international professional organisations, experts and specialised agencies.

In the first year of operation, the agency collected a large volume of data, including that on dangerous waste. Accordingly, a database on dangerous waste and secondary raw materials has been set up. Over the years, collaboration with the agency deteriorated, and at the moment there is no relevant database for any type of waste. This is partly due to insufficient practical regulations on recycling and the absence of appropriate by-laws that should be derived from the Waste Management Law.

The courts, with which the inspection collaborates, are the weakest link in the chain because they have become notorious for issuing mild sanctions and being ineffective. The inspectors have the authority to file charges for business violations, petty offences or, in some instances, criminal acts.

The needs concerning cooperation with other institutes are as follows:

- better cooperation with the courts: and
- better cooperation with the future environmental protection agency.

Permitting System and the Inspectorate

The Environmental Protection Inspectorate in the Ministry of Health and Environmental Protection controls the environmental impact of polluters through three types of permits.

- Facility analysis (i.e. Environmental Impact Assessments) for new and reconstruction facilities was introduced into Serbian legislation as a mandatory requirement in 1992 "(Regulations of the Analysis of Impact of Facilities: Works on the Environment, *Official Gazette RS* Vol. 61/1992).

  This analysis is performed on two levels. A preliminary check is an integral part of city planning requirements, whereas the detailed analysis is an integral part of the design documentation required for construction permits.

  The republican inspectorate controls implementation of environmental protection and conservation measures suggested by detailed analysis.

  The republican inspectors frequently make decisions requiring investors to carry out impact assessments and obtain approvals. However, illegal buildings are fairly common in Serbia. Investors tend to break the law because the process of obtaining all the necessary permits and licenses is complicated and time-consuming, and the sanctions for illegal buildings are not strong enough to form a deterrence.

  The system of approvals for impact assessments is one of the most potent weapons in the arsenal of the ministry and inspectorate.

- Major industrial plants with large amounts of dangerous chemicals are obliged to prepare a chemical-accident risk evaluation "(Regulation on Methodology for Evaluation of Risk of Chemical Accidents and Environmental Pollution, Measures to Prevent Accidents and Provide Relief from Consequences," *Official Gazette RS,* Vol. 60/1994, 63/94). A special board of experts reviews the risk evaluation and approves or rejects it. Because of years of inactivity, only a few risk evaluations have been verified so far.

- The Institute of Conservation of Nature issues a strictly limited number of permits for collection of or trading in endangered flora and/or fauna.

  These licenses are issued after public bidding to some enterprises and are valid only for certain areas, species, amounts collected and time periods. In the course of inspection examination, all amounts have to be accounted for by the license. Alternatively, the inspector files charges for petty offences and notifies the market inspectorate in charge of trade control.

The needs of the permitting process are as follows:

- The involvement of inspectorates in the permitting process should be improved, based on the new draft law. Permit applications that fail to gain an inspector's approval based on environmental protection and conservation shall be rejected.

Compliance Control and Compliance Promotion of Inspection

Inspectors have little power to ensure compliance with laws on environmental protection. Inspectorate' competence is restricted primarily by distribution of competencies to several ministries, so that the best available measures cannot be implemented in practice.

The most obvious example concerns protection of water from pollution: all the enforcement authority in this area is left to the water-resource management inspectorate. The same applies to the control of trade in protected animal and herbal species where success of conservation depends on the appropriate decisions by the market inspectorate. The inspectors have greatest authority in the field of air protection.

While overseeing implementation of measures to protect the air from pollution, the environmental inspector is authorised and obliged to determine whether:

- the air polluter has created conditions for keeping pollution under set limits;
- in instances when pollution limits have been exceeded, that the polluter has undertaken measures to reduce them;
- the polluter tracks emissions and keeps records of these measurements;
- the organisation that has identified the exceeded emission values has notified the inspectorate and submitted a report;
- the municipality has provided for emission measurements in residential areas;
- municipalities have adopted plans to improve air quality, or in areas of particular risk, implemented recovery programmes;
- competent municipal bodies have passed regulations and undertaken measures to reduce emissions in places where recorded episodes of pollution might have poisoned people and animals; and
- municipalities, in their city planning documents, have defined special areas where air pollution should be limited, according to types and volumes.

The inspector is obliged to:

- prohibit operations of non-complying installations until emissions have been reduced to acceptable levels; and
- order the execution of mandatory procedures within set timeframes.

In ensuring compliance with natural resource conservation measures, an environmental inspector is authorised and expected to ensure that:

- conservation of animals and plants and protected natural resources is conducted under the conditions and in the manner prescribed by law;
- temporary bans are enforced on certain activities, pending decisions on the protection of natural monuments;
- protected natural resources have been properly labelled;
- registration of protected natural resources is done according to law, and registration data is entered into records;
- conservation and promotion programmes have been passed and carried out, and annual plans are implemented;
- operating plans for national parks are approved;
- in activities related to protected natural resources or conservation areas, conditions, approvals, permits and licenses are obtained, and the holders of such permits comply with prescribed conditions; and
- protected flora and fauna exports or shipments are properly licensed, and that registrations of such licenses are kept.

Inspectors are obliged to:

- forbid illegal activities;
- order the carrying out of prescribed duties within defined time limits;
- seize temporarily protected natural resources that are supposed to be off limits; and
- seize objects or tools employed in the illegal use of natural resources.

In monitoring the implementation of measures to reduce noise pollution, environmental inspectors are authorised and obliged to establish whether:

- the noise exceeds the level permitted or is being made in a manner outside prescribed levels of use and maintenance;
- noise sources that are installed in buildings, plants or equipment for economic activities and are a unit of their own have, in addition to required documents, written instructions for protection from noise;
- sources are used and maintained in a manner that ensures noise is below prescribed limits; and
- municipalities have established quiet residential and leisure zones and made sure noise measurements are performed regularly.

The inspectors are obliged to:

- ban the sale of noisemakers until identified defects have been corrected; and
- order the carrying out of certain obligations within certain time limits.

In monitoring hazardous-material protection measures — except in the production or sale of explosive substances, inflammable liquids and gases — environmental inspectors are authorised and obliged to determine whether:

- hazardous waste is disposed of in a prescribed manner;
- records are kept on the types and amounts of hazardous materials used in manufacturing, transport, sale and storage and other records are kept concerning their proper disposal;
- enterprises have set up protection measures against waste and dangerous materials as stipulated under the law;
- in cases when an enterprise has had an accident involving hazardous materials, or plans to undertake an activity that may result in an accident, the enterprise has informed the public on the possible consequences of these activities and measures undertaken to prevent accidents, and to address the consequences should an accident occur.

The inspector is obliged to:

- order identified irregularities to be corrected within a defined time limit;
- prohibit enterprises — or other legal entities — from manufacturing, selling or disposing of dangerous materials if they discover that these activities will result in severe irregularities in the implementation of safety measures.
- In monitoring the implementation of provisions in the Waste Management Law, republican environmental inspectors are authorised to:
- inspect facilities, buildings and rooms in which waste is collected and recycled;
- monitor compliance with prescribed conditions for classification, packaging and storage of secondary raw materials;

- ensure compliance with conditions for recycling and storage of waste and secondary raw materials;
- ensure waste incineration; and
- ensure that records are kept on the required data.

Inspectors are authorised and obliged to:

- order implementation of temporary measures to prevent environmental pollution risk;
- inform the competent bodies and institutions on recorded irregularities in the treatment of dangerous materials;
- order measurements if doubt exists as to whether the limits have been exceeded;
- undertake other measures and actions as specified in special by-laws.

The environmental inspectors are in charge of monitoring the implementation of the Law on National Parks. These inspectors are authorised and obliged to:

- get direct insight and collect necessary data and reports on compliance with provisions of the law, other legislation and by-laws;
- order that identified irregularities and shortfalls be corrected within certain time limits;
- forbid activities that are contrary to the law and other regulations; and
- order the carrying out of obligations that have not been fulfilled by set deadlines.

When an environmental protection inspector concludes that the failure to comply with another inspectorate's order endangers the conservation or development of national parks, he is obliged to immediately notify the proper inspecting authority.

It would seem that the listed duties and obligations, as well as the authority of inspectors, enable fairly wide opportunities for implementation of the existing legislation. In practice, numerous by-laws are needed to specify in greater detail certain areas; by-laws called for in many existing laws have never been passed. Therefore, in light of the fact that failure to execute a decision has not been adequately sanctioned by any existing legislation concerning environmental protection, there is an ineffective system in practice that is unable to deal adequately with even emergency situations.

The needs of the compliance checking and promotion are as follows:

- environmental protection inspectors must have total competence in the fields of protection of air, soil, water and natural resources.

Enforcement Procedures

The Republican Environmental Protection Inspectorate controls implementation of legal regulations in the field of environmental protection. The inspection is executed pursuant to the Law on General Administrative Procedures (*Official Gazette FRY*, Vol. 33/1997). Inspection monitoring may be initiated in several manners as follows:

- regular planned supervision;
- supervision upon complaint;
- supervision upon accident; and
- supervision during construction of facilities and outset of activities.

During inspections, the inspector takes notes for agency records. If he/she recognises some irregularities, the inspector issues a decision ordering that the problem be rectified within a specified term. If the inspector determines that the environment is in significant danger, and that the law stipulates judicial liability for that hazard, he/she is obliged to raise charges with the competent court. There are three types of charges that can be raised (the first two are most common in practice):

- charges for business offence;
- a request to start proceedings for minor offences; and
- criminal charges.

Court proceedings usually take a long time, and sometimes are not even properly pursued before they actually fall under the statute of limitations. Sanctions for perpetrators are so mild as to be irrelevant, which allows perpetrators to break the law again and again. No feedback information from the court is provided. The inspector filing the charges usually does not know whether court proceedings have taken place at all, let alone the severity or type of sanctions pronounced.

These measures are possible only for the construction of new facilities (since the environmental impact analysis and obligation of the investor to implement protection measures are harmonised). These are facilities built before 1992. However, the harshest polluters cannot be closed down because the Environmental Protection Law (Article 111) stipulates that the ministry shall determine which installations must be rebuilt to comply with the prescribed environmental protection conditions, measures and terms, which has not been done (10 years after the law was adopted).

According to the Environmental Protection Law (Article 87) any enterprise that may endanger the environment or human health is obliged to cover itself with an insurance agency against liability for damages relat-

ed to this activity. In practice, this insurance system does not work.

The needs in enforcement powers are as follows:

- technical training in enforcement practices (two training sessions per year); and
- training in new laws.

Environmental Inspectorate Organisation, Human Resources, Training

The inspectorate is divided into six departments (the seventh department located in Pristina is out of commission due to notorious circumstances). The organisational chart appears in Annex 2.

The inspectorate head is responsible directly to the Directorate for Environmental Protection of Serbia. Each department has a department head who is responsible directly to the inspectorate head.

The inspectorate has a staff of 39 republican inspectors. Forty-five percent of republican environmental inspectors have bachelor's degrees in chemical engineering. They are followed by those with degrees in biology and forestry (12.5 percent each) and physical chemistry and chemistry (5 percent each). Degrees in law, agricultural engineering, environmental protection engineering, fire-fighting engineering and metallurgy are held by 1 percent each.

All republican engineers have the same competences and authority, i.e. they are not individually specialised in any of the fields. In practice, as much as is feasible, biologists and forestry engineers should be in charge charge of conservation of natural resources, while the technically trained inspectors should control industrial facilities. Eventually, only about 25 inspectors control all activities related to environmental pollution in the whole industry of the Republic of Serbia, which illustrates their inability to competently execute the entrusted tasks.

The inspectorate is poorly equipped. Vehicles, computers and cellular phones are desperately needed.

Until 2002, necessary refresher courses were rarely given. Training was reduced to meetings where year after year the inspectors discussed encountered the problems they had without finding any solutions that might stimulate initiative for operational improvement. The first practical training that exposed the inspectors to foreign experiences (particularly in the field of management of dangerous waste) was held in Kragujevac in August 2001. The meeting was noteworthy in that most of the inspectors expressed a wish for advanced training in skills and knowledge. Presentations related to practical recommendations for management of particular problematic issues were most welcome. In autumn 2001 a seminar for inspectors with biological and biotechnological backgrounds was held in Carska Bara (in the vicinity of Zrenjanin), which is a protected natural resource.

Obviously, the inspectors know only too well which of the current legal regulations are applicable in practice, and which are not. The critical need for emergency amendments to the completely impractical legislation in this field is also obvious.

Financial resources for the inspectorate operations are limited. The districts tend not to provide even the minimum needs for normal activities of the dislocated inspectors in the field (money for petrol and car maintenance, office equipment). The Directorate for Environmental Protection of Serbia gives as much support as possible with its modest resources, but this is far from sufficient.

The most urgent needs are as follows:

- 10 vehicles (approximately EUR 70,000);
- 20 mobile phones (approximately EUR 2,500); and
- 14 personal computers with laser printers (approximately EUR 18,000).

(The list of urgent needs is enclosed in Annex 3.)

Environmental Protection Inspectorate in Practice

The Environmental Inspectorate consists "officially" of 39 inspectors (though 33 would be a more accurate number). In 2000 these inspectors conducted 4,560 examinations, took 1,617 decisions and executed approximately 70 percent of these decisions. They filed 58 business-related offences in court, while filing in 46 instances for minor offences.

The needs for performance indicators are as follows:

- regular training in law and site visits (two sessions per year); and
- development of investigative skills in the form of regular training.

Data Storage and Retrieval Systems

Data on inspector examinations are saved in the archive. Each case has its own number, and case evidence is electronic. There is no database of information collected during inspections.

An attempt to create a united information system for all of Serbia's inspectorates failed. The Institute of Mihajlo Pupin developed software and planned to test it in one of the districts a few years ago.

The Database of Hazardous Chemicals in Serbia is in the final phase. It is being developed by the Directorate for Environmental Protection of Serbia.

Public access to environmental information is stipulated in Article 109 of the Environmental Protection Law, which says that the public has access to data about the state of the environment, and criminal charges will be brought against anybody who conceals such information.

In most of the inspectorates, the number of computers is inadequate.

There is an attempt to build a network of republic administrations.

The needs of data storage and retrieval are as follows:

- PRTR- database software; and
- 14 personal computers with laser printers (approximately EUR 18,000).

Monitoring and Sampling, Access to Information

Monitoring of emissions into the air or water is stipulated by regulations. The Waterworks Inspection is the main authority for protection of water from pollution.

Two groups of regulations define legal limits for air pollution:

1. Regulations of cut-off limits, measurement methods for emissions, criteria for setting up measurement sites and data recording (*Official Gazette RS*, Vol. 54/1992); and
2. Regulations of emission cut-off limits, mode and terms of measurement and evidence of data were published in 1997 (*Official Gazette RS*, Vol. 30/1997).

Systematic measurements of emissions are made over a wide network of sites financed by municipalities and the republic. The measurements carried out at sites funded by the republic are defined by a Decree of the Government of the Republic of Serbia.

The regulations on the cut-off limits for emissions define the terms of measurements according to the type and size of pollutant. Warranty measurements, individual measurements, continuous measurements and annual control measurements are stipulated. The measurements are performed by authorised professional organisations and commissioned by the polluter.

Few polluters voluntarily comply with environmental regulations. Instead, they do so only if forced by the inspection. Normally, emissions are measured only at the behest of an inspector. Major polluters who are obliged to install equipment for continuous measurements have not done so, although the deadline was three years ago.

The problem with implementing regulations lies in the fact that the former Ministry of Environmental Protection has never identified (pursuant to Article 1 of the Environmental Protection Law) which facilities must be reconstructed or announced any deadlines for this reconstruction. Facilities built before 1997 still produce noxious and dangerous matter exceeding cut-off limits.

Information on excessive air pollution is rarely published — not because it is confidential, but because it is scarce. Further complicating the issue is the fact that disclosure systems have not been defined clearly enough. The public gets some of this information from the media, but usually only in cases of environmental accidents. The public is fairly ignorant about "normal" pollution levels.

The needs for monitoring and sampling are as follows:

- training in sampling techniques and use of small monitoring equipment.

Compliance Assessment

The republican environmental protection inspectors issue decisions on compliance with the conditions for initiating activities for minor facilities (for which the license is approved by the municipality) mainly in municipalities without the local municipal (or town) inspectors.

Decisions on minimum technical requirements are not sufficiently detailed because no set of regulations has been passed to elaborate this area.

In practice, the facilities that receive licenses from the republic are required to analyse the environmental impact of their facilities. The ministry in charge of environmental protection issues approvals or rejections of these analyses.

The inspectorate is only a control body which checks whether investors have complied with all protection measures identified in impact analyses that have been approved.

Because of shortcomings in this area, it is foreseen that the new Law on the Environmental Protection System will provide for a better procedure for environmental licenses with substantially better control.

Enforcement Performance, Actions and Reporting Capabilities

The Republican Environmental Protection Inspectorate has no legal authority to collect on-the-spot fines, except for minor offences related to protected natural resources according to the Article 107

of the Environmental Protection Law. In practice, republican inspectors do not collect even these, since all protected natural resources (national parks) have guards authorised to collect on-the-spot fines.

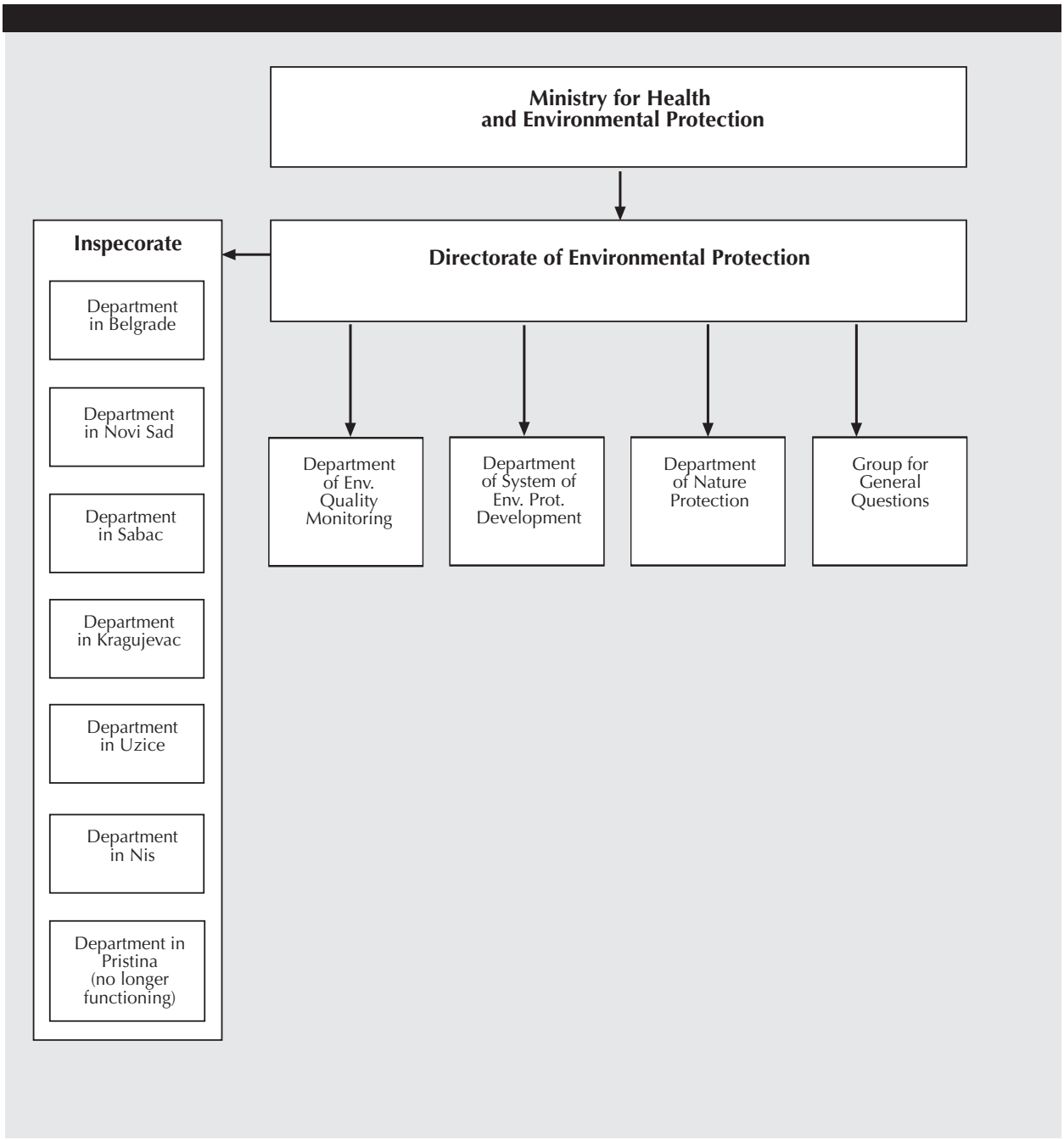
Reporting to the court is one of the most powerful instruments in the inspector's arsenal, but they use this reluctantly because collaboration with courts is poor. Inadequately low fines and slow court procedures are not a sufficient deterrence to violators of the law.

The inspectors inform their superiors of their activities in written reports and at meetings; in emergencies, such as chemical accidents, they may use the phone or fax. The reports are mandatory and required annually. Also, semi-annual, quarterly or sometimes even monthly or weekly reports are occasionally prepared. The inspectorate head submits the annual report of inspectorate operations to the Director of Directorate for Environmental Protection of Serbia. This report is an integral part of the report of the ministry in charge of environmental protection.

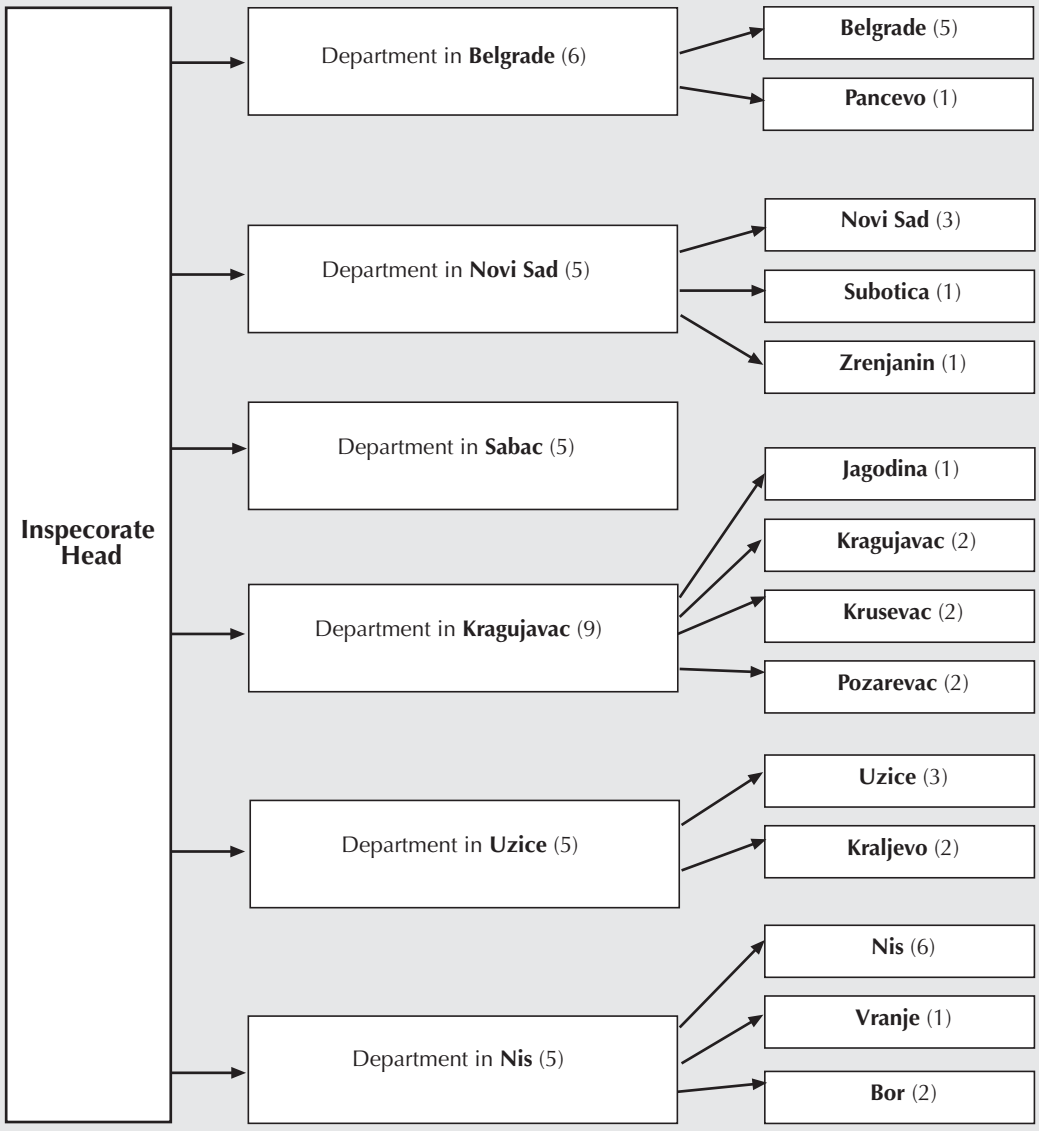
In addition to the general reports, special reports are written upon the request of high officials to cover special fields of monitoring, territory or individual enterprises.

There is no methodology set out in regulations for evaluation of inspectorate operations. It has become customary to publish the exact data on the number of examinations, decisions and reports to the court. The records on the number of executed decisions are relatively poor and unreliable, but it can be roughly estimated at about 70 percent.

Annex 1: **Organisational Chart of the Ministry of Health and Environmental Protection**



Annex 2: **Inspection Services of the Directorate for Environmental Protection of Serbia**



(Note: Figures in brackets illustrate the number of inspectors.
Three remaining inspectors in Kosovo are not working at present.)

Annex 3: **List of Urgent Needs**

Urgent needs can be divided into four groups:

	Needs	Number	Cost
1.	Cars	10	DEM 140,000
2.	Computers with printers	14	DEM 35,000
3.	Cellular phones	20	DEM 5,000
4.	Training	-	DEM 33,000
Total			DEM 213,000

Each year, two practical training sessions of five days each for 40 inspectors shall be organised.

Table of contents

Country Profile: **Republic of Montenegro**

Background

The Republic of Montenegro is one of the two constitutional members of the Federal Republic of Yugoslavia; the other is the Republic of Serbia. The present government of Montenegro has expressed its intention to develop democracy, strengthen international relations and move towards a more market-oriented economy. Furthermore, Montenegro has declared its objective to become an ecological state. In 1991, the Parliament of the Republic of Montenegro adopted the Declaration on the Ecological State of Montenegro, a commitment that is repeated in Article 1 of the Constitution of 1992: "Montenegro is a democratic, social and ecological state." The declaration was followed by the long-term, sustainable-development document, "Directions of Development of the Montenegro Ecological State," adopted by the government of Montenegro in 2001.

Environmental protection is advocated elsewhere in the Montenegrin Constitution. In addition to Article 1, Article 19 states: "Everyone shall have the right to a healthy environment and shall be entitled to timely and complete information on its state. Everyone has the duty to preserve and promote the environment." Later, Article 65 states: "The State shall protect the environment. Freedom of earning and free entrepreneurship shall be restricted by environmental protection."

Administration

Ministry of Environment and Physical Planning

The major institution overseeing environmental policy in the Republic of Montenegro is the Ministry of Environment (Annex 1), which was founded in 1991. Following governmental reorganisation in July 2001, environmental responsibilities are vested in the Ministry of Environment and Physical Planning (MoEPP).

The Ministry is entrusted with the administrative operations related to the following:

- the environmental protection system;
- environmental policy,
- strategy;
- standards;
- guidelines;
- granting permits for all industries and non-industries;
- compliance checking;
- enforcement of laws pertaining to and protection of nature and natural resources;
- national parks;
- establishing and implementing protection measures for protected natural resources and natural objects;
- setting environmental conditions for public works projects;
- protection of air;
- protection from ionising and non-ionising radiation;
- protection from hazardous and radioactive substances while they are being produced;
- trade- and waste disposal; and
- international environmental cooperation and supervision.

The Ministry also regulates public utilities, including solid waste management and protection of space.

The Ministry has two departments: the Department for Environmental Quality, which includes an environmental inspection unit, and the Department for General Environmental Policy. In addition, the Ministry oversees the Institute for Nature Protection, the Hydro-Meteorological Institute, the public enterprise for the management of national parks in Montenegro and the Centre for Eco-Toxicological Research.

Montenegro has no independent environmental protection agency, either as a part of the MoEPP or as a separate government organisation.

Overseeing implementation of the Environment Law (*Official Gazette of the Republic of Montenegro*, No. 12/1996) and regulations is entrusted to the Ministry of Environment and Physical Planning through its ecological inspection unit. The enforcement of Montenegrin environmental requirements is centralised. Only government inspectors, who number four, conduct inspec-

tions. Their main responsibilities are to check compliance with environmental regulations and to implement environmental policy and detect violations. Contact information at the Ministry of Environment and Physical Planning appears in Annex 2.

The environmental inspectors are entrusted to enforce environmental regulations are defined by Articles 43–45 of the Environment Law:

Article 43

Supervision as to the enforcement of this law and of the regulations enacted based on it shall be entrusted to the ministry.

The activities of the inspectors/supervision shall be performed by the environmental inspection in compliance with the law.

Article 44

Each environmental inspector is entitled, within his or her authority, to supervise the following:

- implementation of protection measures as prescribed by the regulation on granting/issuance of environmental permits on the basis of EIA statement;
- observance of standards and norms stipulated by regulations enacted on the basis of this law;
- whether the quality of the environment is monitored in compliance with this law and other regulations enacted on the basis of provisions stipulated herein;
- implementation of prescribed measures for environmental protection;
- the operating pattern, work conditions and technical equipment of firms and other legal entities in terms of measures for environmental protection;
- keeping the registry and records on data pertinent to environmental protection;
- distribution of funds appropriated for implementation of measures for environmental protection;
- the use of the ecological logo in compliance with provisions set out herein and the regulations enacted on the basis of this law; and
- other activities and equipment that affect the quality of the environment.

Article 45

If an inspector, in the course of performing an inspection, finds that, in addition to an infringement of this law, some other law or regulation is violated related to environmental protection or some segment of the environment, he or she is obliged to report the infringement to another competent inspection authority, in addition to measures he undertakes under his or her own authority.

The other competent inspection authority is obliged to inform an environmental inspector of any measures he undertaken.

In cases when an environmental inspector establishes an irregularity or illegality for which another inspectorate has authority, he or she is obliged to inform the Environmental Minister in order to initiate a procedure for joint inspection control.

As Montenegro has no environmental protection agency, the environmental inspectorate carries out some duties that would belong to that agency. The environmental inspectorate is involved in developing standards and guidelines, and in enforcement. The environmental inspectorate implements environmental standards and measures, and oversees the manner and work conditions of entities in charge of environmental protection.

Environmental legislation

The Environment Law of Montenegro is a general law that prescribes only basic legislative measures and leaves space for regulations of specific issues. Deadlines ranging from three months to two years are set for adoption of these regulations. All regulations were supposed to have been adopted by April 1998, but specific regulations are not yet complete. Montenegro already has mechanisms to create a better enforcement system. The development of such a system mainly relies on Parliament and the government to incorporate environmental requirements and strictly enforce them.

The administration last reviewed these elements of an environmental legal framework in the years indicated:

- Ministry of Environment, 2001;
- authority of inspectors,1996;
- specific air pollution regulations (emissions), 2001;
- water pollution laws, 1997;
- waste regulation, 2000;
- noise and vibrations, 1995 (2000);
- urban planning law, 2000; and
- soil pollution, 1997.

The time needed to change or develop environmental legislation depends on whether it is a law, decree or regulation. The laws are adopted by Parliament, decrees by the government and regulations by ministries. On average it takes 12 to 24 months to create or change a law, six to 12 months for decrees, and three to six months for regulations.

In addition, it is necessary to reorganise institutes, with the first priority being to establish and define an environmental protection agency in Montenegro. A good basis already exists: the Centre for Eco-Toxicological Research carries out most environmental

monitoring programmes in Montenegro and is the best -equipped environmental body in the country, and thus could be easily converted into an environmental protection agency.

The basic needs in administrative requirements for the inspectorate are as follows:

- development of specific sectoral laws;
- development of standards prescribed by the law; and
- reorganisation of institutes.

Institutions Connected to Environmental Inspection

The parties involved in environmental protection in Montenegro can be divided into the following categories: ministries, public research institutes, universities and higher educational institutions, public enterprises/service institutions, business and industry, and NGOs.

The Ministry of Agriculture, Forestry and Water Management administers laws and regulations on the quality of soil and farm land, water resources and wastewater. It carries out its work partly in cooperation with the MoEPP and the Ministry of Health, and is also in charge of forest management, hunting, and fishery resources. The ministry oversees inspectorates for water management, forestry, hunting, fishery and agricultural land.

The Ministry of Health looks after drinking water and makes sure it is not polluted with chemicals, biological contaminants or radiation. It monitors effects of environmental pollution on the health of the population, and effects of noise, vibration and ionising radiation (in medicine). As a public health authority, it acts as the State Sanitary Inspectorate.

The Ministry of Economic Affairs looks after mineral resources, the power supply, geological research and mining. It oversees inspectorates for energy, geological research and mining.

The Ministry of Tourism is entrusted with the National Park and its environmental treasures. An inspectorate for tourism, founded in November 2001, acts as a public tourism authority.

The Ministry of Internal Affairs includes a department for fire and explosion protection and is in charge of fire-fighting and the monitoring and transportation of hazardous material and waste. The ministry's inspectors cooperate with the police in all aspects of their work whenever and wherever it is necessary.

The Montenegrin Academy of Sciences and Art contributes with scientific research projects.

Port authorities are responsible for the transportation of goods through ports and are obliged to cooperate in monitoring imported goods.

NGOs, of which there are many in Montenegro, represent public participation in environmental decision-making and are a strong force in the fight for a healthy environment.

Institutes (including the Centre for Eco-Toxicological Research, Hydro-Meteorological Institute, Institute for Nature Protection, Institute for Health Protection, and the Institute for Marine Biology) monitor environmental, hydrological and meteorological phenomena and serve as environmental research bodies.

On the local level, responsibilities in environmental policy are vested with the regional offices of the ministries. Local governments (municipalities) have much less power, although they can assume a greater sphere of responsibility. Their work, however, is limited by their modest budgets and technical capabilities (except in Podgorica).

The conclusions derived from the above overview: Montenegro has no streamlined environmental administration, and in many cases, the user of the natural resource and the authority responsible for its protection is the same authority. In addition, although the government is responsible for ensuring that environmental interests are defended along with commercial ones, this has not been achieved because of economic development pressures. In addition, environmental policy enforcement suffers due to the division of competencies among several bodies and inadequate coordination.

The need for cooperation among institutes in environmental inspection can be defined as:

- establishing integrated inspections that would cover all aspects of environmental and health issues (this could be done by an independent body that would carry out all inspections, or a body that co-ordinates the work of different inspectorates);
- creating coordinating bodies for enforcement on the national and regional levels;
- creating coordination bodies on the national and regional levels to investigate environmental crimes; and
- creating an environmental protection agency as a national institute for environmental research that establishes close cooperation between inspectorates.

Permitting System and Connection to Environmental Inspection

The most powerful tool in environment protection is the environmental permit, issued in accordance with the Environment Impact Assessment Act (EIA) ("*Official Gazette of the Republic of Montenegro*, No. 14/1997"). The purpose of the EIA is to ensure that development plans are environmentally sound and sustainable, and that any environmental consequences are recognised

early in the project stage and taken into account in project design. Based on the EIA study, the potential impacts (beneficial or adverse) of development projects on the environment can be identified and evaluated. EIA studies are required for any project that may cause pollution to the environment and the costs for the study are borne by the developer. The regulation also prescribes the categories of projects for which the EIA is obligatory (79 categories), the contents of EIA studies, licensing criteria that must be set out by the expert institutions which draw up the studies, public participation requirements and methods of assessment, and ways to verify studies.

The environmental inspectors are not involved in issuing permits. Their responsibility comes after the permit is issued. They ensure that restrictions and requirements prescribed in the permits, based on the EIAs, are adhered to.

The Ministry issues approximately 190 permits per year, based on EIA studies.

The needs of environmental inspection in the permitting process are as follows:

- to be involved in the whole permitting process, including the rejection or accepance of permit applications;
- to improve advising capacity and capability:
- to increase compulsory inspectorate consultations; and
- to increase manpower for permit checking.

Compliance Control and Compliance Promotion

There are five forms of compliance monitoring in Montenegro:

- inspections,
- self-monitoring, self-record keeping and self-reporting,
- environmental auditing,
- citizen complaints, and
- ambient monitoring.

Inspections

Due to the complex division of responsibilities related to environmental policy, the work of the environmental inspectorate in compliance assurance is rather limited. In accordance with provisions of the law, the environmental inspectors oversee:

- the inspection of protection measures against air pollution;
- protection of natural resources and biodiversity;
- protection from ionising and non-ionising radiation; and
- protection from hazardous materials and waste.

Compliance checking includes:

- annual compulsory checks;
- ad hoc checks;
- complaint-driven checks;
- compulsory follow-up actions;
- reporting obligations; and
- non-compliance responses.

Unfortunately, compliance checking does not cover all environmental fields.

In carrying out these duties, cooperation of the inspectors with other competent ministries, i.e. inspectorates, is indispensable and suggested by the Environment Law (Article 45). Furthermore, inspectors must cooperate with authorised expert institutions (laboratories) that can provide them with all necessary and relevant data for making environmental decisions and undertaking activities with environmental protection organisations. Inspectors must work with judiciary bodies concerning criminal reports or with private parties who demand that steps be taken against polluters.

Self-monitoring, self-record keeping and self-reporting

Self-monitoring, record-keeping and reporting are required under the regulation on water pollution, air pollution and storage of waste. With regard to self-monitoring and self-record keeping, general regulatory requirements are usually translated into installation-specific requirements contained in permits. Only air pollution provisions in the Environment Law outline particular requirements in specific cases (for example, polluters who continuously release emissions that are likely to significantly affect environmental quality must establish a system for automatic monitoring and processing of emissions data).

With regard to reporting, detailed requirements are provided by the regulations themselves. Reporting is related to a scheme providing special fees for the use of natural resources (for use of water, for discharge of wastewater, for air emissions and for storage of waste). The regulations provide detailed requirements on reporting and set deadlines for the completion of an annual report.

Environmental auditing

For new facilities, the 1997 regulation on the EIA provides detailed requirements on the content of EIAs, types of projects that must prepare EIA statements, and the substance of the monitoring programme. EIA statements are required for an environmental permit.

According to Article 14 of the Environment Law,

existing facilities are obliged to devise environmental protection programmes that include:

- a list of regulations that rule their environmental protection activities;
- a list of impacts on the environment that are caused by the installation's activities and use of hazardous substances;
- an environmental impact assessment of possible results of accidents or incidents;
- measures for prevention, limitation and monitoring of environmental pollution;
- a list of detrimental and hazardous substances used in the plant's production, and how much of each type is used;
- a registry of detrimental or hazardous substances released into water, soil or air that enumerates substance type, quantity and disposal method;
- deadlines for the implementation of measures; and
- organisations in charge of carrying out the measures and their respective powers.

Annual reports on the effectiveness of the environmental protection programmes are to be submitted to the local authority where the facilities are located.

Citizen complaints

There are no special programmes that encourage citizen involvement in monitoring compliance. Nevertheless, citizen complaints are estimated to be a significant source of detecting violations (inspections resulting from citizen complaints are estimated to be about 20 per year). In addition the members of numerous NGOs and newly founded groups of "eco-rangers" play an important role in reporting non-compliance with pollution standards.

Ambient monitoring

A well-established monitoring system covers pollution (from stationary and mobile sources), surface- and underground water, radioactivity, bio-diversity and soil pollution. The Centre for Eco-Toxicological Research, the Republic Hydro-Meteorological Institute and the Institute for Nature Protection maintain networks of such monitoring stations.

Compliance promotion

Considering the cultural resistance to enforcement in South European countries, compliance promotion is an important element of enforcement programmes because it encourages voluntary compliance with environmental requirements. Both planned and ad hoc compliance promotion activities are available. Experience in other countries has shown that enforcement alone is not as effective enforcement combined with promotion. One barrier to compliance in Montenegro is the cost. Installation managers may want to comply with the environmental requirements, but might not be able to afford it. Therefore, enforcement is important to create a climate in which members of the regulated community have clear incentives to make use of opportunities and resources provided by promotion. Article 24 of the Environment Law created financing arrangements that can help solve this problem.

Separate regulations shall stipulate the terms for:

- deductions and exemptions from taxes and other charges that reward the use of clean technology, or production and trade of goods that are more beneficial to the environment than the alternatives. This includes the use of renewable sources of energy (sun, wind, wave power, bio-gas etc.) and equipment and machines used for environmental protection and monitoring;
- deductions and reduction of taxes and other public charges for producers who ensure the recycling of materials, the use of used rather than new machines or their parts, the reuse of products or their packaging materials, the institution of cash deposits for bottles or other schemes to reduce negative effects on the environment; and
- deductions or stimulating measures for all legal entities that collect secondary materials, or whose production is based on secondary materials (recycling) as well as for all those who, in some other way, remove secondary materials or waste from the environment and contribute to its improvement.

These separate regulations are not yet completed.

The Strategy of Implementation of Quality System in Montenegro, adopted by the government in 1994 (revised in July 1999) reserves an important role for voluntary compliance. The strategy includes implementations of international standards ISO 9000 and ISO 14000 within enterprises. The Government of Montenegro has allocated financial support for enterprises that implement these standards. As a result, 30 enterprises have ISO 9001-4 certificates, and three are in the phase of preparation for ISO 14001 certificates.

Other compliance promotion approaches, such as providing education and technical assistance, building public support and publicising success stories, are still developing.

The needs in the field of compliance checking and compliance promotion are as follows:

- compliance-checking planning procedures,
- communication skills for cooperation with other authorities,

- compliance promotion strategies,
- codes of conduct for compliance checking and compliance promotion, and
- non-compliance response strategy.

Enforcement Procedures

Assuring implementation of regulatory requirements and prevention of uncontrolled environmental pollution is possible only through an efficient inspection programme.

Inspections for environmental protection are initiated as follows:

- regular planned inspections;
- those ordered by the deputy minister or minister;
- those in response to complaints;
- follow-ups on accidents; and
- checks during construction of facilities requiring EIAs.

The inspectors plan inspections on a monthly basis.

Inspectors may notify the installation prior to inspection or visit unannounced, gather data in and around a particular installation, record and report on their observations. If there is a direct danger to human health or the environment, they have the right to issue orders that must be obeyed immediately to prevent risk.

Inspections may be routine or ad hoc "for cause" (planned on a monthly basis or made in response to a citizen's complaint, police report or accident). Inspections may also be either complex or focused on a single aspect of the environment. In the former case, three to four inspectors (environmental, sanitary, water management, etc) are involved, and their task is to examine the entire environmental performance of a plant. In the latter case, one or two inspectors are involved and they focus on a single issue, such as air pollution management within a plant.

The inspector has the right to: enter facilities (with experts or whomever else he needs); interview the installation's personnel; gain access to all files, documents and records; observe operations; and take samples for analysis. The inspector must provide the manager of the installation with his report. The manager has the right to include comments or reservations in the report. The inspectorate is entitled to recover the cost of the inspection if it results in findings of non-compliance. The report is a basis either for ordering steps for mitigation or penalties (non-compliance fines or the halting of harmful activity).

Inspectors have the power to impose non-compliance fines; halt activity endangering the environment; and ban the sale and import of raw materials, fuels, machinery or other equipment or goods that fail to meet environmental requirements. No new installation or activity that could harm the environment may commence until the inspectorate is notified and satisfied with the application of mitigating measures defined in the environmental permit.

In the event of obstruction, inspectors may call for the police, who are obligated to help inspectors take all the steps they consider necessary.

According to the Environment Law the liability for environmental pollution is implemented through the following three principles:

- `Prevention principle`: the obligation of natural and legal persons polluting the environment to undertake at once necessary measures to eliminate danger and further damages (Article 29);
- `Restitution and compensation principle:` the obligation imposed on natural and legal persons causing environmental pollution to clean up environmental damage at their own expense (Article 31). In the event of pollution caused by more than one substance or when the polluters' individual contributions to pollution is difficult to establish, the cost of reclamation and prevention shall be jointly borne by all polluters (Article 34); and
- `Regulatory principle:` natural and legal persons whose activities threaten the environment with hazardous substances and dangerous activities are obliged to take out insurance against possible damages to third persons (Article 30).

Criminal acts committed by natural persons, or those appointed to act on behalf of legal entities that involve acts against human health and environment, are regulated by the Montenegrin Criminal Act (*Official Gazette of RM*, Nos. 42/1993, 14/1994, 27/1994). The law sanctions certain activities that cause air, water or soil pollution.

Requirements for environmental protection have been enacted on numerous levels. Apart from criminal sanctions intended to protect the air, water and soil, there are those intended to ensure:

- a healthy environment — i.e. forests, flora and fauna;
- public security for people and property against activities causing danger, destruction or damage to public infrastructure (such as damage to dams, etc.) and
- human health; and the environment (pollution of drinking water).

Criminal acts are defined as pollution of air, water of the soil to a major degree over an extensive area. Whether or not the act is deemed criminal depends on the pollutant involved. It rises to the category of a criminal level when the pollution considerably exceeds permissible limits or spreads over an area wide enough to come under a provision of the Criminal Act. The

essence of this instrument is to make a distinction between criminal acts and related economic crimes regarding environmental pollution.

The Criminal Act prescribes types of penalties and minimum and maximum penalties for criminal acts. The minimum penalties for criminal acts of this kind are fines, and the maximum penalty is a 10-year prison sentence.

An inspector may issue mandatory sentences within the framework defined by his or her authority. When inspectors deem that the breach of regulations constitutes a criminal act or an infringement of the regulations they are enforcing, inspectors are duty-bound to immediately file a report concerning the act, i.e. to file a demand for prosecution of the violation.

Inspectors have no executive power to check accounts or bookkeeping, but if they suspect bookkeeping irregularities, they may request assistance from a financial inspector to conduct an audit.

The ecological inspectorate cooperates with other inspectorates in other government ministries and agencies involved in monitoring compliance, police, customs officers and border officers.

The needs in executive powers of the Environmental Inspectorate in enforcement are as follows:

- training in how to prepare an effective enforcement programme;
- technicaltraining in enforcement practice;
- training in law;
- training in human-resource management; and
- training in planning.

Environmental Inspection Organisation, Human Resources, Management and Training

Organisation and human resources

The inspectorate for environmental protection began its operations in the middle of 1991. At that time the Ministry employed 11 people, including one main state inspector. At present there are 20 employees, including four inspectors (including the main inspector). All are located in the Ministry in Podgorica. Anyone working at the MoEPP must have a university education in a certain discipline. For inspection tasks, the ministry requires a college degree in technology, natural sciences, metallurgy and/or law. Furthermore, all employees must pass the exam for state administration officials. No other special training is envisaged.

There are also environmental officials in some local municipalities, but they have no real legal authority to perform any kind of activity independently. Their real duties are to help their federal counterparts with environmental inspections.

Since the inspectorate is a very important segment of the MoEPP, it is imperative to ensure adequate conditions for a regular and continuous inspection programme over the entire country, implying a necessary number of inspectors with adequate qualifications and equipment.

Financial and material resources

The material resources for the environmental inspectorates are the same as in all other inspectorates in Montenegro. Only the basic needs of inspectors are covered, such as salaries, travelling expenses and a portion of mobile phone expenses. All revenues gained as a result of sanctions against polluters go directly into the republic's budget. This is the direct result of the bad economic situation and the long period of sanctions during the past 10 years.

The environmental inspectors are not equipped with any kind of sampling or equipment to analyse environmental samples taken at facilities. Neither do they have safety equipment to protect themselves from hazards that may be encountered during inspections.

Training programmes

There are no regular training programmes for inspections and inspectors, mainly due to the lack of funds and also due to the fact that environmental inspectors are supposed to be highly experienced prior to being hired.

The most important cooperative activities between other institutions and the environmental inspectorate are in the fields of analyses of polluting facilities, environmental analyses, and environmental accidents. The institutions provide analytical and expert services to environmental inspectors in accordance with needs and requests.

Problem identification

The essential problems related to inspectorate activity include the following:

- unsynchronised actions of inspection services of different ministries (for health, waters, environmental protection and physical planning);
- insufficient number of environmental inspectors;
- lack of environmental inspection at the municipal level;
- lack of inspectors specialised in protection of individual elements of the environment (air, water, soil, nature conservation, etc);
- lack of modern quick-reaction technology and information technology;
- contradictory regulations underlying the activities of all bodies of the ministry and other inspectorates; and

- lack of organised continuing education in the field of environmental protection.

Objectives and measures

To improve environmental inspections, the following measures are proposed:

- provide the conditions for capacity building and technology acquisition of the inspectorate and permanent continuous education of inspectors;
- provide conditions for better information flow by setting up of an environmental information system;
- more systematic follow up of obligations stipulated under the EIA;
- intensify awareness and promotion of inspectorate activities;
- improve cooperation with other inspectorates regarding the protection of maritime resources, waters and water resources, exploitation of mineral resources, building and chemical products; and
- pay special attention to the standardisation of work and actions of the inspectorates and individual inspectors.

Resources available in environmental inspectorate concerning personnel, training and management

- Number of inspectors: 4
- Number of inspection visits per year: 231
- Percentage of personnel with education in biology: 0
- Percentage of personnel with technical training: 75%
- Percentage of personnel with education in chemistry: 0
- Percentage of personnel with education in law: 0
- Percentage of personnel education in economics: 0
- Percentage of personnel with education in forestry: 25%
- Average years of experience: 20
- Average number of weeks per year offered in management training: 0
- Number with special management training in environmental inspection: 0

Environmental Inspection in Practice

An official annual report prepared by the Republic of Montenegro's chief ecological inspector in 2000 is used in the chapter: The breakdown of major activities for environmental inspectors is as follows:

- Percentage of court cases per visit: 0.87%
- Percentage of reports per visit: 100%
- Percentage of visits that are complaint-driven: 16.45%
- Percentage of court cases won: NA
- Average number of days worked on inspections per year: 250

The social policy in Montenegro, combined with a weak and an unstable economy, creates problems in the implementation of adopted regulations; particularly those referring to inspections. The insufficient financial potential of the private sector means some penal measures cannot be imposed according to existing legislation.

To verify and evaluate the work of environmental inspectors, indicators must be developed and organised training programmes must be introduced.

Needs include the following:

- performance indicators;
- a course in report writing;
- training in laws;
- training in site visits; and
- development of investigative skills.

Data Storage and Retrieval System

Information storage system

All documentation is kept in paper archives. The archives and documentation are well-organised, with separate sections for waste, chemicals, industries and permits. But the environmental inspection unit lacks a computer system that will allow rapid and sophisticated information storage, retrieval and analysis. The unit has no personal computers for its needs.

The MoEPP and Secretariat for Development are currently in the first phase of implementing an environmental information system. The Government of Montenegro finances this project. The information system is set up to generate sector-specific reports on compliance behaviour, permit quality and environmental impacts. The inspectors will receive intensive training, supported by written materials, about how to obtain, record and transmit data.

Public accessibility

Due to the lack of a computer system, information is distributed to the public through media announcements (newspapers, television and radio). This can include information about requirements, ways to meet them and enforcement activities. There is also a designated telephone number where citizens can pose questions, receive information and report pollution cases.

Due to the lack of equipment for a sophisticated data storage and retrieval system, it is necessary to procure the following:

- computer hardware;
- software for databases;
- training in the use of computer;
- training in the use of databases;
- industrial inventory activities; and
- English-language courses.

Monitoring and Sampling, Access to Information

Due to annual environmental monitoring conducted by various institutions in cooperation with the MoEPP, all aspects of environmental protection and pollution prevention are steadily improving. Environmental monitoring programmes have advanced substantially over the past few years. Now programmes exist that address the real environmental needs of Montenegro. These programmes are modern and bear a strong semblance to those of European countries.

Air pollution

In addition to the Environment Law as the general legal framework, Montenegro has a specific law against air pollution: the Air Protection Law of 1980. The law defines the concept and the fundamental principles of action, and also designates the areas in which more detailed regulations should be adopted.

According to Article 8 of the law, the town and country planning system is the principal system of air pollution prevention. It involves the preparation of plans by local authorities, which then guides future activities. In order to protect human settlements from activities causing air pollution, local authorities are obliged to establish zones where such activities are limited or can only be done if special measures are also taken.

The law prescribes a system of prior authorisation by a national authority for any activities that are likely to pollute the atmosphere above permissible limits. Permits must not be issued unless applicants take the necessary steps to prevent air pollution and observe the legal parameters for emissions and air quality. For such activities the law requires obligatory self-monitoring of emissions, record keeping and the delivery of reports to the prescribed authorities.

Article 19 of the law requires continual air pollution monitoring throughout the country by means of sampling air at fixed measuring stations located in and around urban settlements. In addition, it appoints institutions to carry out this task, namely the Centre for Eco-Toxicological Research and the Hydro-Meteorological Institute of Montenegro.

The maximum permissible concentrations of specified substances in the air are regulated by the Air Quality Standards Regulation, which came into force on February 22, 1982. It sets limits for ambient concentrations of sulphur dioxide, nitrogen dioxide, nitrogen monoxide, fluoride, hydrogen sulphide (H_2S), chlorine (Cl), oxidants and hydrocarbons auch as methane and smoke. Limits are set on suspended particulate matter (SPM), including lead (Pb) and cadmium (Cd). The law also limits deposited particulate matter (DPM), including lead and cadmium. Limits on some 100 inorganic and organic substances are applied to industrial activities. A distinction is drawn between short-term limit values (daily, hourly) intended to prevent high concentrations of short duration, and long-term limit values (annually) aimed at reducing chronic exposure.

The subsequent regulation, adopted on February 22, 1982, relates to limiting emissions into the air of certain pollutants originating from factories. The regulation applies to plants that produce or build with metal, chemical industries, power generators, vehicle manufacturers and waste treatment plants. The MoEPP is working on revising this regulation.

Continuous monitoring of air quality at fixed measuring stations began in 1982. In that year the Government of Montenegro adopted the Air Pollution Monitoring Programme and financed its operations for the first time. The programme set up a network of 19 measuring stations located in 17 cities. Nearly all of the stations double up as meteorological stations of the Republic Hydro-Meteorological Institute, which were established earlier.

Radioactivity

The programme of systematic evaluation of radionuclides, established by the Centre for Eco-Toxicological Researches of Montenegro, has 10 chapters for the measuring of:

- background radiation in Podgorica and Bar;
- radionuclide levels in the air through daily sampling and summary monthly sampling;
- radionuclide levels in Skadar Lake through quarterly samples;

- radionuclide levels in sea water, which include, gamma-spectrometric analyses of seawater from Bar and Herceg Novi (summary monthly samples) and gamma-spectrometric analyses of bio-indication organisms (twice a year);
- radionuclide contents in precipitation (summary monthly samples);
- radionuclide levels in human food (practically all types of food are analysed, but only those produced in Montenegro);
- radionuclide levels in cattle feed;
- radionuclide levels in building materials;
- radionuclide levels in soil; and
- radon levels in homes and work places.

Methods used to process samples, prepare samples, and conduct analyses are outlined in the following:

- "Measurement of Radionuclides in Food and the Environment: A Guidebook"; IAEA Technical Reports Series No. 295.
- EML Procedures Manual HASL 300, 28th Edition; U.S. Department of Energy, Environmental Measurements Laboratory.

The Air Pollution Monitoring Programme, which has been significantly improved in the last two years, presents detailed analyses of the radioactivity level in Montenegro.

Soil pollution

A soil pollution control programme is carried out quarterly. Analysis of soil pollution is carried out:

- in 100 sampling spots throughout Montenegro's largest cities — Podgorica, Berane, Bar, Pluzine, Pljevlja, Ulcinj, Herceg Novi, Bijelo Polje, Kolasin, Kotor and Tivat; and
- in four sampling points near electric power transformaer facilities.

Measurements of levels of heavy metals, PAHs and some specific organic elements are also conducted.

Waters

The Water Quality Monitoring Programme has four elements:

- sea water (18 sampling points);
- river water (36 sampling points);
- lakes Crno, Plavsko and Skadarsko (nine sampling points);
- water wells (20 sampling points).

The sampling and analyses of the Water Quality Monitoring Programme are carried out quarterly. The quality of drinking water is overseen by the Ministry of Health.

Public access to monitoring and sampling data

The results of all monitoring programmes are submitted to the MoEPP and serve as the basis for a report on the state of the environment in the Republic of Montenegro. The report is adopted each year by the government and is distributed to all the country's 21 municipalities; and is avalable upon request.

It is clear that the state of the environment is monitored, checked and recorded by the MoEPP. The Environmental Inspectorate is not directly involved in monitoring, however ambient monitoring data helps inspectors detect violations without having to make site visits, and helps them determine whether permit holders are meeting their environmental requirements. Due to the difficulties in proving that a specific pollutant came from a particular installation (except in cases where an emission has a characteristic composition that gives away its origin) ambient measurement data generally only suggests a potential violation. Proof of violations usually requires a site inspection. In the event of accidents that are potentially dangerous to the environment, the Environmental Inspectorate performs sampling by itself or in cooperation with experts from other institutions.

The needs for monitoring and sampling are as follows:

- to equip environmental inspectors with mobile monitoring equipment;
- to organise training in the use of such equipment;
- to equip environmental inspectors with mobile sampling equipment;
- to organise training in sampling techniques; and
- quality assurance.

Compliance Assessment

Compliance assessment is achieved through the collecting of self-monitoring data from industry, through complaint checks and through the permitting authorities' own investigations.

In practice, compliance assessment has been only partly achieved in Montenegro. Environmental protection and sustainable development are new concepts in Montenegro. However, the country can boast of:

- a modern and well-defined set of environmental laws, which though imperfect, are still applicable;

- good, modern environmental monitoring programmes;
- well-equipped laboratories, especially those at the Montenegro Centre for Eco-Toxicological Research;
- well-defined environmental requirements; and
- well-preserved environment and natural resources.

To improve compliance in Montenegro it would be useful to define the following:

- strategy on compliance assessment, and
- compliance indicators.

Enforcement Performance, Actions and Reporting Capabilities

Enforcement involves the measures undertaken by the Government of Montenegro and the MoEPP to assure compliance with domestic environmental legislation and multilateral agreements and conventions. Enforcement also involves steps to prevent or correct dangerous situations. These measures are performed primarily by the environmental inspectorate and other public inspectorates. Some of these measures are as follows:

- regular inspections of existing facilities;
- the issuing of permits, in accordance with specific regulations, for new facilities;
- legal actions against violations of the law; and
- assistance to institutions that perform environmental analyses (CETI and others).

Enforcement also involves education and promotion, which includes:

- public-awareness campaigns through TV, radio and newspapers;
- education of young people (the Eco-Rangers programme, for example);

There are obstacles, however, such as:

- human behaviour and lack of respect for environmental laws;
- resistance of regulated facilities due to high costs of correcting problems;
- lack of support for enforcement community;
- lack of financial resources; and
- high cost of clean technologies.

According to the Environmental Inspectorates annual report from 2000, 44 fines were issued, but no fees were collected.

Data concerning the number of successful court cases is not available because environmental cases are of secondary importance to the courts.

The annual report also shows several examples that show that inspection work has improved the state of the environment, or at least improved public awareness of the environment.

The needs for enforcement indicators and reporting capabilities that will improve the work of Environmental Inspectorate, are as follows:

- training courses for annual report writing, and
- peer reviews.

Statements and Evaluations of Experts

The main difficulty in enforcing environmental laws is the lack of well-defined regulations covering specific questions of environmental protection. There are many imperfections that are presented under subchapters, which were written in consultation with experts in specific environmental subjects. The observations and suggestions presented therein show some imperfections of the environmental legislation. The expert analyses and inspections are closely related and are important in the process of strengthening national environmental institutions.

Air pollution

There are three main control activities:

- establishing air pollution limits in work environments;
- controlling emissions of dangerous and harmful materials into the air; and
- establishing limits for air pollution in work places and setting standards for air quality and working conditions.

Air pollution is defined in:

- the *Official Gazette of the Republic of Montenegro*, No. 25/2001; and
- the *Official Gazette of the Republic of Montenegro,* No. 4/1982.

Emissions of dangerous and harmful pollutants into the air are defined in:

- the *Official Gazette of the Republic of Montenegro,* No. 14/1980.

Establishment of limits of air pollution in workplaces is defined in:

- Regulation No. 15/01 – 149/52, *Official Gazette of SFRJ* No. 54/1991, and Standard JUS Z.B0.001, 1991.

There are some improvements needed:

- Regulations that address the problem of air pollution are outdated. There is no value for maximum permissible concentrations (MPCs) for some pollutants, and some of the MPCs are too high.
- There are no regulations for MPCs, specifically for precipitation, so the value for drinking water applies.
- Regarding dust in the air, MPCs are absent for all heavy metals except lead and cadmium.
- Regarding air deposition (sedimentation) MPCs are missing for all heavy metals except lead and cadmium.
- There are no regulations requiring analyses and evaluation of automobile emissions.
- Requirements are lacking for continuous measurement of emissions from stationary air pollution sources, including factories and thermo-electric power plants. Inspections are made only in response to complaints from local residents, or at the request of environmental inspectors.
- For the quality of air in working environments, there is no obligation to the continuously measure air quality. All measurements are performed at the request of workers, inspectors, and sometimes in response to accidents. Furthermore, MPC values are incomplete and out-of-date.

In respect to the Regulatory Act of Emissions of Pollutants into the Air, given in the *Official Gazette of the Republic of Montenegro,* No. 25/2001:

- There are precise descriptions of equipment quality and measurement methodology of immovable sources.
- Authorised institutions for these kinds of measurement are defined in detail.
- There are no values assigned to any of the pollution types.
- This regulation act is too general, and hardly applicable in practice.

Suggestions:

- Create new laws and regulations that address all aspects of air pollution and precipitation quality, as well as their control. These strictures should be based on the Regulatory Act of Emissions of Pollutants into the Air (*Official Gazette of the Republic of Montenegro*, No. 25/2001).
- Define precise MPCs for all pollutants, and reconcile MPC values with those in the regulations of the EU's environmental protection agencies.
- Develop a registry of air polluting installations and plan and carry out air pollution control.
- Organise cooperative work with other South Eastern European countries to control trans-boundary transportation of air polluting materials.

Radioactivity

Analysis of radioactivity consists of these main parts:

- systematic measurements of radionuclide levels in the environment;
- analyses of imported goods;
- control of radiation sources in medicine, industry and general use; and
- quality control of ionising sources and devices which produce ionisation radiation, especially in medicine.

These activities are defined in domestic law and regulation acts officially given in:

- the *Official Gazette of Yugoslavia* No. 46/1996.
- the *Official Gazette of Yugoslavia* No. 45/1997.
- the *Official Gazette of Yugoslavia* No. 32/1998.
- the *Official Gazette of Yugoslavia* No. 9/1999.

In these official gazettes, there are 12 laws, sub-law acts and regulation acts, which have the following advantages:

- It is obvious that all the acts regulating radioactivity are now concordant with regulations in the European Union and United States. More precisely, some of the basic principles and values are taken from EU and US regulations, and some are even tighter than those of the EU and US.
- There is a very precise mathematical model for calculation of maximum permissible concentrations (MPC) in all aspects of the environment in matters concerning public health (food, drinking water, air, radon levels, etc.)
- MPC values are given for most radionuclides.
- Drinking water regulations have separate MPCs for all relevant radionuclides.
- For building materials, precise MPCs for all natural radionuclides are given, along with a mathematical model for estimation of permissible accumulations.
- There is precise definition of equipment types, desired quality of equipment, methods for analyses, etc.

- There is an obligation to provide evidence of where radiation originates from.
- There is an obligation to provide evidence of radiation exposure, both in the work place and in the general population.

Despite these merits, there are many deficiencies in the application of regulations:

- Though the regulations have well-defined MPCs for every single radionuclide, there is no mathematical model that accounts for the summary impact of all present radionuclides, evidenced by all types of samples. The only exception is the regulations on building materials.
- MPC values are based on the "maximal permissible intake" of radionuclides over one year, which in turn is based on an average annual consumption of food, air, etc. for an average person. The problem is that in Montenegro, there is no official statistical data on any type of food or beverages, and therefore scientists must use statistical data for Republic of Serbia to calculation Montenegro's MPCs.
- MPC values in cattle feed are equalised for MPC estimates on human food. This is not correct because radionuclide transfer coefficients are important in the food chain, e.g. the chain linking cattle feed to beef to humans. There is minimal radionuclide transfer from the bottom to upper levels of the food chain.
- There is no official evidence of any kind of radiation sources that are in public use.
- There is no official evidence of the general population's or professional workers' exposure to radiation sources.
- Customs lack any kind of radiation and dosimetry checks or prevention.
- There is no coordination in the control of imported goods between sanitary, trade and veterinary inspectors.
- There is no clear definition of who oversees radiation sources, and there is no special inspection unit for radiation protection.
- Inadequate time is set aside for analyses of imported goods. Samples for analyses are taken at the moment when goods arrive at customs, which is bad because for gamma-spectrometry analyses of radon (Ra) 226, it is necessary to hermetically seal the sample at least 28 days prior to conducting the analysis.
- There is no systematic, precise quality control of radiation sources in health institutions.
- Personal dosimetry checks for professional exposure to radiation are not routine or organised in a systematic way.
- Though the law sets out well-defined acceptable limits for radon concentration in buildings, there is no obligation to check radon levels prior to or during building construction. Neither is there an obligation for radon measurements of soil on sites slated for building construction.

Despite these observed shortcomings, radioactivity and radiation protection are among the most precisely regulated areas of domestic codes concerning the environment and civil use. In addition, these regulations are highly concordant with those of the EU and United States.

Soil pollution

The problems in soil pollution control are similar to those in other parts of environmental control. Laws and regulations addressing soil pollution are only partly written in accordance with the regulations of the Europe Union.

The main problem areas are:

- a lack of MPC values for all pollutants;
- the methodology for sampling is not precisely set out;
- there is no obligation for systematic measurements of soil pollution near electric transformer facilities;
- the contents of mineral oils (oil derivatives) are not among the pollutants that must be controlled; and
- there is no obligation to control levels of pollution in agricultural soil.

Waters

Under the classification of water, there is drinking water, surface water, underground water and seawater. Laws and regulations on water pollution are only partly harmonised with Europe Union regulations.

Some of these laws and regulations are well-defined:

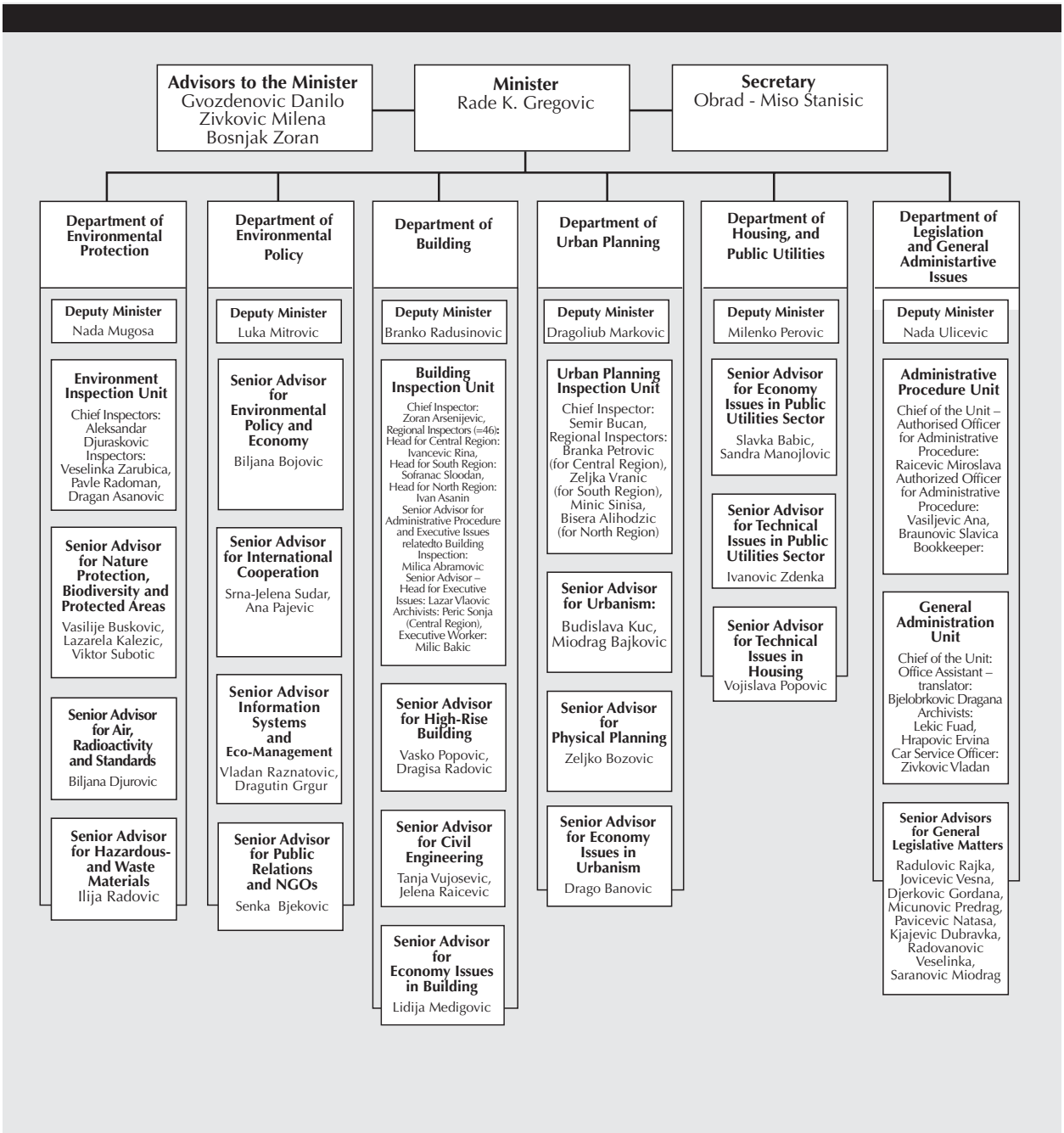
- Classification and categorisation of water in terms of its quality is well-defined.
- There is an appropriate definition of water quality for the cultivation of fish and shellfish.
- MPCs for drinking water, especial for type AI, are lower than in the EU.
- Seawater is classified in terms of its use, whether it be port water, swimming water or water for the cultivation of fishes and shellfish

Water regulations are problematic in other areas:

- Definitions are given without the necessary precision.
- MPC values lack some pollutants.
- The quality of drinking water is well defined in a reg-

ulatory act passed in 1998, which is on par with EU norms. However, another regulation states that only healthcare institutions may make judgements about drinking-water quality. Other institutions may perform analyses, but are not allowed to make judgement about their analyses.

Annex 1: **Organisational Chart: Ministry of Environmental Protection and Physical Planning**



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THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE (REC) is a non-partisan, non-advocacy, not-for-profit organisation with a mission to assist in solving environmental problems in Central and Eastern Europe (CEE). The Center fulfils this mission by encouraging cooperation among non-governmental organisations, governments, businesses and other environmental stakeholders, by supporting the free exchange of information and by promoting public participation in environmental decision-making.

The REC was established in 1990 by the United States, the European Commission and Hungary. Today, the REC is legally based on a Charter signed by the governments of 27 countries and the European Commission, and on an International Agreement with the Government of Hungary. The REC has its headquarters in Szentendre, Hungary, and local offices in each of its 15 beneficiary CEE countries, which are: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, FYR Macedonia, Poland, Romania, Serbia and Montenegro, Slovakia and Slovenia.

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Environmental Enforcement and Compliance in South Eastern Europe